

PERSONALITY DYNAMICS AND BIOGRAPHICAL FACTORS ASSOCIATED
WITH OCCUPATIONAL ROLE-INNOVATION IN FEMALES

By

Marguerite Gilbert Fowler

A DISSERTATION PRESENTED TO THE GRADUATE COUNCIL OF
THE UNIVERSITY OF FLORIDA
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
DEGREE OF DOCTOR OF PHILOSOPHY

UNIVERSITY OF FLORIDA

1976

To those two dear people whose encouragement
was so sustaining:

Robert L. Fowler
Elizabeth S. Eaton

ACKNOWLEDGEMENTS

I am indebted to all of my doctoral committee members, both as scholars and role-models of truly caring individuals. Without their patience, interest, and stimulation, this research would not have been nearly so personally rewarding.

I thank Dr. Audrey S. Schumacher for her gentle shaping of my enthusiastic but relatively diffuse research notions. She consistently transformed the raw material of feelings and intuition into meaningful and tangible goals, always within the atmosphere of creative autonomy. Her sensitivity and willingness to let you "be" have been crucial to my "becoming."

I am indeed grateful to Dr. Wilse B. Webb for his un-failing and profound understanding of me and my ideas, and for many memorable chats which were liberating to both the mind and spirit. His always facile grasp of the "big picture" has been both amazing and heartening.

I really can't remember exactly when or where I met her, but then that simply bespeaks the natural and continuous pleasure I've derived in knowing Dr. Madelyn Lockhart. Her candor, insight, and warmth as a human being have been a real source of inspiration.

My sincere appreciation to Dr. Robert Hornberger whose levity, astuteness, and cherished friendship have always managed to help put things in perspective, although keeping them

there was frequently another matter.

To Dr. Paul Satz goes my admiration for his continued efforts and accomplishments as the scientist-professional that he is, and the positive impact that his example has had on my own thinking. His over-stimulating assessment course was a significant turning point for me.

My sincere thanks to all the students who so generously gave of their time and who, in sharing of themselves, their thoughts, feelings, and aspirations, were a vitalizing force in the study above and beyond anything quantifiable. Needless to say, the whole study never could have been launched were it not for the immensely facilitative efforts of various college faculty who made the research known to their students. Thank you Dr. Edna Ambrose, Dr. Esther Morgan, Mr. James McFarlane, and Dr. Patricia Russo, among others.

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	iii
LIST OF TABLES	vii
LIST OF FIGURES	viii
ABSTRACT	ix
INTRODUCTION	1
Research Rationale	13
Hypotheses	17
METHOD	21
Design	21
Participants	22
Materials	23
Procedure	34
RESULTS	38
Experimental Variables	38
Descriptive Variables: Experimentally-Related	49
Descriptive Variables: Exploratory	60
DISCUSSION	71
Study Sample Description	71
Experimental Phenomenon of Self-Devaluation and Related Variables	79
Personality/Biographical Comparisons of Role-Innovative and Role-Traditional Females.	94

TABLE OF CONTENTS (Cont.)

	Page
APPENDICES A-H	104
REFERENCE NOTES	124
REFERENCES	125
BIOGRAPHICAL SKETCH.	132

LIST OF TABLES

Table	Page
1 Means and Standard Deviations of Group Experimental Performance Expectancy Scores for Sex-Related Tasks	39
2 Means and Standard Deviations of Group Devaluation Scores for Sex-Related Tasks.	40
3. Analysis of Variance of Group-Devaluation Scores for Sex-Related Tasks	42
4 Analysis of Variance of Simple Main Effects of Group Devaluation Scores for Sex-Related Tasks. . .	43
5 Tukey's HSD Test: Group (G) Comparisons for the Neutral Sex-related Task ($ST_{Neutral}$)	44
6 Tukey's HSD Test: Sex-Related Task (ST) Comparisons for the RIF Group (G_{RIF})	45
7 Tukey's HSD Test: <u>BSRI</u> Masculinity Scale Score Comparisons Among Primary Groups.	51
8 Means and Standard Deviations of <u>BSRI</u> Scale Scores for the Study Sample and the Normative Sample . . .	52
9 Tukey's HSD Test: <u>E</u> Locus of Control Comparisons Among High and Low <u>Femininity</u> Female, and Male Groups.	56
10 Tukey's HSD Test: <u>E</u> Locus of Control Comparisons Among Primary Groups	58
11 Means and Standard Deviations of Group <u>PRF</u> Scale Scores	61
12 Tukey's HSD Test: <u>PRF</u> Affiliation Scale Score Comparisons Among Primary Groups	62
13 Tukey's HSD Test: <u>PRF</u> Aggression Scale Score Comparisons Among Primary Groups	64

LIST OF FIGURES

	Page
Figure 1. Experimental apparatus	24
Figure 2. Line-drawing stimulus	25
Figure 3. Mean devaluation for groups as a function of sex-related task condition	47

Abstract of Dissertation Presented to the Graduate Council
of the University of Florida
in Partial Fulfillment of the Requirements for
the Degree of Doctor of Philosophy

PERSONALITY DYNAMICS AND BIOGRAPHICAL FACTORS ASSOCIATED
WITH OCCUPATIONAL ROLE-INNOVATION IN FEMALES

By

Marguerite Gilbert Fowler

June, 1976

Chairman: Audrey S. Schumacher

Major Department: Psychology

We are presently witnessing a cultural revaluation of sex-role stereotypes. The substantive concern is with the possible detrimental effects of sex-role prescriptions upon the full development of males' and females' capabilities, and has as its goal a more androgynous conception of personality.

The female sex-role denotes a constellation of characteristics typified by "warmth-expressiveness," while the male sex-role denotes "rational-competence." Sex-roles are also socially institutionalized status characteristics, and for females, this connotes a culturally devalued sex-role relative to the positively valued male sex-role. This study examined the relationship of the female sex-role to female self-conceptions, and the potential effect that the lower status of the female has in many areas, viz., occupational role-innovation. This is to say, that given the denotative and connotative aspects of the female sex-role, those females who manifest

stereotypically feminine self-conceptions, psychologically or behaviorally, seem particularly vulnerable to self-devaluation influences in the way of social censure or ostracism arising from attempts to actualize themselves through role-innovation. For those fewer females who are role-innovative, exemplified by their occupational aspirations, an ego resilience and more androgynous self-conception is hypothesized.

The study sample consisted of three primary groups: occupationally Role-Innovative Females (RIF); Role-Traditional Females (RTF); and a group of Males. All participants were advanced students attending the University of Florida. Both experimental and descriptive measures were utilized. An experimental devaluation analogue in a 3 x 3 factorial design examined the differences among these groups in self-devaluation tendencies as a function of the ostensible sex-related nature of the performance task (Masculine, Feminine, Neutral). Self-devaluation was defined as the change in performance expectancy estimates, and was experimentally induced by devaluative feedback.

Groups were not found to differ significantly in initial performance expectancies prior to the induction of self-devaluation. Female groups, but not the males, evidenced significant differences in self-devaluation as a function of the sex-role salience of the sex-related tasks. The RIF's were found to devalue significantly less than RTF's in the Neutral task condition only. The RIF's were also found to

devalue significantly less in the Neutral condition relative to the Masculine or Feminine task conditions. In the main, however, the differential sex-role salience of tasks was minimal for these three groups, contrary to predictions.

Psychological femininity was not found to be significantly positively correlated with self-devaluation tendencies in females, contrary to predictions. Those females found to manifest a relatively high degree of psychological femininity were not found to be significantly more externally (E) oriented in locus of control than females relatively low in femininity or males, contrary to predictions. Relatively high femininity in females was not found to correspond with female role-traditionality, and relatively low femininity was not found to correspond with female role-innovation as tacitly presumed. The RIF's were not found to manifest more masculinity or androgyny and less femininity than RTF's, contrary to predictions. Females exhibiting relatively greater tendencies to self-devaluation were found to manifest significantly less psychological dominance than females exhibiting relatively lesser tendencies to self-devaluation. Numerous descriptive measures, primarily exploratory in nature, revealed few or no significant differences between the RIF's and RTF's in personality/biographical factors. A measure of self-rated "attractiveness" also failed to reveal any significant differences between these groups of females.

Experimental findings were discussed in terms of personality and situational determinants. Descriptive findings

were discussed in terms of developmental and familial factors, lifestyle preferences, and vocational goals.

INTRODUCTION

We are presently in a period when sex-role stereotypes or standards, defined as the constellation of socially designated behaviors intended to differentiate between males and females on the basis of biological sex, are being questioned. This revaluation arises from two major forces, the feminist movement and the humanistic movement currently, and is basically concerned with the possible detrimental effects of sex-role prescriptions upon the full development of men's and women's capabilities (Broverman, Vogel, Broverman, Clarkson & Rosenkrantz, 1972; Garskof, 1971; Horner, 1972; Maccoby, 1966). While sex-role stereotypes, their content, how they develop for their role incumbents, and their implications are presently the problem focus of a goodly amount of research, the overall goal of much of this research lends itself to facilitating full "personhood" rather than just masculinity or femininity within individuals, regardless of their sex (Bakan, 1966; Carlson, 1972; Kasten, 1972; Mednick & Tangri, 1972; Weisstein, 1971). This conception of full personhood entails freedom from culturally imposed definitions of masculinity and femininity, but transcends these in favor of a more androgynous personality. This androgynous gender orientation represents the balanced integration of what is presently conceived of as uniquely masculine or feminine, and it is maintained that only this type of complementarity within a given individual

will make for fully effective and healthy human functioning (Bem, 1976; Block, 1973).

What the masculine and feminine sex-role stereotypes consist of, and how, particularly in the case of females, these stereotypes develop and are maintained by socializing agents will only be highlighted here, as they are extensively reviewed elsewhere (Fowler, Note 1). What will concern us, rather, in the present study, are some of the important practical consequences of stereotyped female gender-roles, consequences which derive from a general devaluation of the female role (Bardwick, 1971; Entwisle & Greenberger, 1972; Lunneborg, 1970; Miller, 1971; Singer & Singer, 1972).

An analysis of the content or denotative aspect of the gender-role stereotypes for males and females reveals that those characteristics stereotypically ascribed to each sex respectively could be subsumed under the superordinate constructs of "rational-competence" for males, and "warmth-expressiveness" for females (Broverman et al., 1972; Jenkin & Vroegh, 1969; Sherriffs & McKee, 1957). These stereotypes also reflect strong consensus about behaviors and characteristics appropriate to males and females, consensus which cuts across groups differing in sex, age, marital status, and educational level (McKee & Sherriffs, 1959; Rosenkrantz, Vogel, Bee, Broverman, & Broverman, 1968; Steinmann & Fox, 1966). The connotative aspect of these stereotypes in the way of the differential valuation of those characteristics ascribed to males and those ascribed to females also reflect a posi-

tive social valuation of masculine traits relative to the devalued, rather than neutral valuation of the stereotypically feminine traits (Broverman, Broverman, Clarkson, Rosenkrantz, & Vogel, 1970; D'Andrade, 1966; MacBrayer, 1960; McKee & Sherriffs, 1957). It is not, however, simply the mere existence of sex-role stereotypes which is so potentially troublesome, but that the appropriate stereotypes are implicitly and in the main, uncritically incorporated into the self-concepts of males and females (McKee & Sherriffs, 1957; Rosenkrantz et al., 1968), and have even come to be regarded as an important index of one's social adjustment by mental health professionals (Broverman et al., 1970; Neulinger, 1968; Weisstein, 1971). In the case of females, at least, this means that to be feminine is to be passive, conforming, dependent, physically attractive, and above all, socially desirable in an external or "other-directed" orientation. It also means that the content of the self-conceptions of males and females will probably reflect the differences in the esteem with which the two sexes are regarded, or once again in the case of females, the diminished esteem or general devaluation. That is to say, that a diffuse status characteristic such as sex comes to be culturally institutionalized (D'Andrade, 1966), and to the extent that it is similarly internalized by females in their self-concept formation, the lower status of the female likely has a potentially adverse effect for females in many areas (Cohen, 1965; Dornbusch, 1966).

Females are socialized into these stereotypic roles by a multiplicity of developmental influences, some central and overt, parental sex-role models and peer group expectations for example (Lynn, 1969; Kagan, 1971), while others are more peripheral and covert, such as the socially institutionalized process of ascription by sex at birth and its implications for differential regard, expectations, and treatment, of males and females (Angrist, 1969; Bardwick, 1971; Bettelheim, 1973; Douvan, 1970; Maccoby, 1966). Once socialized into these stereotyped roles, there are numerous subtle but pervasive forces, both internal and external to the individual females involved, which result in their remaining in these roles (Bem & Bem, 1971; Bernard, 1968; de Beauvoir, 1952; Keniston & Keniston, 1964). Not the least of these forces is the well socialized affiliative need on the part of females, the need to be liked, to be approved of, in short, to be found socially desirable and esteemed by others, on which is predicated, by and large, the externally derived sense of females' self-worth or self-esteem (Bardwick, 1971; Bettelheim, 1973; Douvan, 1970).

It is abundantly clear, however, in reviewing these myriad influences that collectively shape and maintain female gender-role stereotypy, that the social practices conducive to feminine sex-typing are also typically antithetical to those that lead to achievement-oriented behavior. What a paradox, as Stein and Bailey (1973) point out in their review of the socialization of achievement orientation in females, when one

considers that although females achieve at relatively high levels in childhood, that the ratio of female to male under-achievers increases with age until, at the time of college, their ultimate levels of achievement are considerably lower than those of males. By this time, the proportion of female underachievers is found to exceed the proportion of male under-achievers. This same developmental paradox for individual females has pervasive practical implications for the culture and economy when taken in toto across women. The socialization of women via others' expectations for them (Angrist, 1969) into stereotyped gender-roles results in poorly differentiated womanpower (Bird, 1971; Kreps, 1973), with only a minority of women exercising role-innovative options in defining themselves and their lives in uniquely self-actualizing terms (although self-actualization is not exclusive to role-innovation). Not only does this constricted funneling of womanpower result in the relatively indiscriminate homogenization of potentially differing female talent (Bem & Bem, 1971), but this is done at no small cost to society, since society loses not only the uniquely differing contributions of one-half of its population, women, but it does so at a disproportionately high marginal cost (societal investment in women) relative to its marginal revenue (women's productivity) (Lockhart, Note 2).

This is not to say that most women lack achievement motivation, heretofore defined as a stable disposition to engage in independent striving for success in any situation where standards of excellence are applicable (Atkinson & Feather,

1966; McClelland, Atkinson, Clark & Lowell, 1953). While this conceptualization of the achievement motivation construct has received reasonably good empirical support with males, this has not typically been the case with females. This stands to reason, since the personality characteristics associated with achievement behavior such as assertiveness, competitiveness, independence, and a belief in one's own competence are, for the most part, contrary to cultural sex-role prescriptions for appropriate feminine behavior. It would seem that the apparent reason, then, for the relative neglect of females in theory and research in achievement motivation is that while there appears to be a need on the part of females to manifest achievement efforts in the attainment of excellence, both their expression of this manifest need and its associated goals are not restricted to the typically assessed achievement domains of academic and/or occupational attainment, but rather may find expression in social skills (affiliation) and other areas perceived as feminine in their process and content requirements (Stein & Bailey, 1973).

Both achievement striving and adherence to the stereotyped female gender-role are fraught with demonstrated mixed rewards and punishments for females. While achievement orientation and feminine role performance can be combined in a variety of ways, there is apparently some inherent conflict between them, insofar as fears on the part of women of social rejection, loss of femininity, or presumed abnormality (Hoffman, 1972; Horner, 1972). A woman may satisfy achieve-

ment needs while also reducing some of the conflict with the cultural gender-role demands in a number of ways, i.e., by vicarious fulfillment through the accomplishments of a spouse or children (Lipman-Blumen, 1972), by concealing her accomplishments (Horner, 1972), by diminished effort and competition (Weiss, 1962), and by choosing a feminine occupation or remaining in a low status position within her chosen occupation. It is not, therefore, mere coincidence that females are found disproportionately in careers that involve traditional female endeavors, i.e., over 70% of American women are in the four fields of teaching, nursing, secretarial work, and social work (Bird, 1971). That these career choices do not result entirely from internalized personality dispositions or volition is well substantiated by O'Leary (1974) in her thoughtful treatment of attitudinal barriers to occupational aspiration in women. In addition to the internal factors, which include fear of failure, low self-esteem, role-conflict, and fear of success, there are the very real external factors of societal sex-role stereotypes and the low expectations of the culture for women's achievement (O'Leary, 1974; Stein & Bailey, 1973).

For women who, in spite of the barriers to occupational aspiration, attempt to diverge from the traditional female gender-role in choosing and achieving for themselves innovative roles, particularly in the way of occupational roles, there are still strong negative sanctions brought to bear upon them (O'Leary, 1974; Stein & Bailey, 1973; Tangri, 1972). Perhaps such persistence on their part is better understood when

cast in the framework of the existing theory surrounding occupational choice. As both Super (1957) and Korman (1970) point out in their theories of vocational choice and work behavior, since occupational choice is in effect a means of implementing one's self concept vis-a-vis engaging in behavioral roles found satisfying and maximizing one's sense of cognitive consistency, occupational choice could, indeed, be considered a major or perhaps even the major reflection of one's self-concept or identity status, or perhaps even the major vehicle for actualization of one's ideal self-concept (Wheeler & Carnes, 1968). If this be so, imagine, then, the potential dilemma that arises for women who would be role-innovative in the area of occupational aspiration. On the one hand, women have been reared to fulfill a stereotypic role in which society largely casts them, a role which has its origins in an empathic, intuitive, other-oriented ego-style (Bardwick, 1971), in which the affiliative motive is central to the development of self-esteem (Douvan & Adelson, 1966). And, for women, social skills are a central area of achievement concern (Stein & Bailey, 1973), and affiliation is seen as achievement and affirmation of one's self (O'Leary, 1974).

To the extent that a woman's self-esteem incorporates traditionally feminine stereotypic notions, it is plausible to anticipate that she will be hesitant to engage in behaviors requiring characteristics societally typified as male sex role appropriate. . . . However, if as Bardwick (1971) suggested the value

one places on the self determines the level of self-esteem and the lower a person's self-esteem the greater the anxiety and the greater the tendency to assume a societally prescribed role, it is plausible to suggest that women, whose self-esteem is lower than their male counterparts', may be hesitant to engage in behaviors requiring the assumption of highly valued male sex role appropriate traits. Regardless of whether this negative conception of feminine value is internalized in the self-concept of a given woman or simply a reflection of what she considers to be the females' sex role appropriate stance as reflected by societal stereotypes, it may be anticipated to effect the achievement directed behavior of that woman (O'Leary, 1974, p. 815)

While there are pressures to engage in feminine role activities, on the other hand there are relatively few rewards for doing so, especially when one considers that the culture values instrumental activity as manifest in vocational achievement, and rewards ego-styles that enhance vocational success. Thus, women find themselves in the frustrating position of being unable to optimally fulfill the socially desirable role of the instrumentally oriented, achieving individual, and that of the ideal "feminine" women simultaneously (O'Leary, 1974). As Stein and Bailey (1973) note, however, there are rewards, as well as negative sanctions in the way of adverse feedback (social censure, ostracism) for the woman who chooses to pursue occupational achievement for its own sake. Yet, as mentioned earlier, the choice of a feminine career likely reduces both internal conflict and negative external feedback, and is one possible course of

events emanating from this difficult combination of circumstances, with no apparent ready solution.

But what of women who are highly role-innovative and who opt for fields of endeavor typically regarded as "masculine" in their departure from traditional feminine pursuits? It should not be surprising that high achievement motivation seems to be characteristic of females who manifest masculine academic/vocational interests (Baruch, 1967; Shelton, 1968; Sundheim, 1963), particularly when one considers the odds against such role-innovation. In one of few currently published studies done on occupational role-innovation in females, the author, Tangri (1972), remarks that occupational choice has been studied much more among men than women, probably because of the existing "sex map of the work world" (Bird, 1971, p. 39) or occupational segregation on the basis of sex-roles to date. Tangri (1972) investigated the relationship between background, personality, and college experiences, and sex-atypical occupational choices (role-innovative) and sex-typical occupational choices (role-traditional) respectively, by means of numerous descriptive data. Although several of her data were suggestive rather than conclusive, the characteristics found to differentiate role-innovative females from role-traditional females were primarily personality-motivational factors, with role-innovators found to be basic-

ally more autonomous, individualistic, and motivated by internally imposed demands for achievement performance. They also expressed more doubts about identity issues and their ability to succeed, which were thought to reflect both the difficulty and ambiguity of the roles in terms of standards of performance and their social meaning. There was also some evidence of role-modeling of more educated working mothers rather than the frequently presumed cross-sex identification. And, while the career commitment of role-innovators was also found to be greater than that of role-traditionals, yet they were not found to have rejected the core female roles of wife and mother. Therefore, according to Tangri (1972), the career choices and level of career commitment of role-innovators could not be viewed as having been made by default when other alternatives fail. Tangri (1972) concluded on an optimistic but perhaps premature note, stating that perhaps several of the widely accepted notions about the kinds of women who aspire to male dominated professions could be laid to rest in light of the data.

Gump (1972), in a closely related study that examined the relationship of sex-role attitudes to psychological well-being and achievement plans in college women, found that the majority of women believe it is possible to assume the role of wife and mother, while also gratifying needs for self-realization and achievement through career considerations. Neither happiness nor the establishment of meaningful relationships with men differentiated females traditional in sex-role orien-

tation (other-oriented) from females primarily interested in realizing their own potential (self-oriented). Additionally salient was the finding that females found to obtain the highest ego-strength scores were also typically those pursuing both marriage and career objectives, suggesting according to Gump (1972) that perhaps ego-strength may be negatively related to the adoption of the traditional female gender-role, i.e., more purposive, resourceful women are less traditional in their gender-role orientation.

Both the times and women, however, would seem to be changing, and so, too, perhaps the "sex map of the work world," if we're to believe Van Dusen and Sheldon (1976) in their timely life cycle perspective on the changing status of American women. As they point out in light of a number of statistical indices, the tendency until recently has been to equate the family life cycle with the female life cycle (i.e., most women's lives have been regulated by the family life cycle, with career choices circumscribed by family roles of wife and mother). These authors marshal numerous data reflecting both the tremendous influx of women into the labor force, as well as the changing composition (increasing heterogeneity) of the female labor force over the past several decades.

The sex labeling of jobs, the occupational segregation of women, and the consequent income differentials between men and women have been remarkably persistent in the face of dramatic demographic and socioeconomic changes. But it is precisely these changes that will inevitably re-

structure the career experiences and labor market activity of women in the next several decades. The present female occupational distribution, as is noted in the 1975 Manpower Report, is the result of myriad influences, some in early childhood: "Role differentiation in early life later affects educational and occupational choices, hours and location of work, and other factors which relegate women to lower level positions in the lower paying industries." (U.S. Department of Labor, 1975, p. 63)

The change that is coming can already be seen in the choices young women have been making in their educational and their family "careers." Because marriage is no longer an end in itself; because so many women spend time outside of marriage or in between marriages; because family/parental roles occupy a relatively short portion of a woman's total life in today's two-child society ; because women are receiving the education and training (and with it the career aspirations) to cause them to plan for and expect employment opportunities parallel to those of men; and finally, because all of these conditions represent changes from the recent past, to note that the pattern of female labor force participation is likely to change is anticlimactic. (Van Dusen & Sheldon, 1976, p. 114)

With these facts and trends in mind it would seem that the personality dynamics and biographical factors associated with role-innovation and role-innovators, particularly when considered in the context of the socially devalued female gender-role otherwise merit further investigation, which is the purpose of this study.

Research Rationale

It is the thesis here, that the relationship of sex-role to self-concept is an important aspect of stereotyped female gender-roles. In the case of females this entails

an understanding of the potential effect that the lower status of the female may have in many areas, viz., occupational role-innovation. More specifically, in light of the culturally devalued, stereotypic feminine role, as well as the largely external or "other-oriented" sources of derived self-esteem in females, it is hypothesized that the self-conception (evaluative attitudes toward the self) is less resistant to pressure toward devaluation in females than in males. Not only is it posited that this is likely a discriminating between-sex phenomenon, but it may also be a discriminating within-sex phenomenon. By this is meant that not only is the self-conception of females probably less resistant to pressure toward devaluation than that of males, but it is hypothesized that this is especially so for women whose self-conception of "femininity" more closely corresponds to the conception of femininity incorporated in the stereotyped female gender-role. This self-conception of femininity is thought to be manifest in behavior consistent with the female sex-role and/or the psychological dimension of femininity per se. It is, therefore, expected that occupationally role-innovative females are more resistive to self-devaluation than role-traditional females, which is thought to be related to their having chosen for themselves and persevered in their role-innovative options. It is also expected that the self-

conception of females will be susceptible to self-devaluation influences to the same degree that they manifest psychological femininity per se, with its devalued and other-oriented connotations. It also seems probable that females who select occupationally innovative roles also manifest more psychological masculinity and/or androgyny than females who select more occupationally traditional roles, since these role options would seem to be most congruent with their respective self-conceptions, and consequently their gender-role orientations.

Furthermore, it also seems probable that this posited relationship between female stereotypic self-conceptions of femininity and devaluation of the self as a potential lack of ego resilience may, itself, be a function of the sex-related nature of the tasks on which self-competence is evaluated, i.e., whether the tasks are presumably more sex-role appropriate for males than for females, or vice versa. Therefore, to the extent that sex-role stereotypes are salient to individuals, it is anticipated that the sex-related nature of a given task will have a moderating effect on the phenomenon of self-devaluation.

In addition, if, as it seems, femininity is typified by a

basically external or other-directed orientation, it is also anticipated that an individual's locus of control, or whether the responsibility for what transpires in one's life is attributed "internally" or "externally" to the individual involved, may also be related to the posited relationship between female stereotypic self-conceptions of femininity and self-devaluation as a potential lack of ego resilience. This is to say that females who manifest a relatively high degree of psychological femininity should also likely be more externally oriented, thereby also making them more vulnerable to self-devaluation influences than females who manifest a relatively low degree of psychological femininity and, concomitantly, should be less externally oriented, and who are thought to more closely resemble males on these dimensions.

Finally, a number of other personality and biographical variables of interest, primarily exploratory in nature, suggested themselves within the context of Tangri's (1972) and Gump's (1972) seminal research on role-innovative females, as well as some few other meaningful considerations derived from a review of the extant literature on female gender-roles (Fowler, Note 1). These variables were primarily those pertaining to developmental experiences, familial factors, vocational plans, lifestyle preferences, physical attractiveness, and normal personality dimensions.

An understanding of the relationship of these various personality and biographical variables may help to explain why it is that women apparently subscribe to social stereotypes

of their sex more strongly than do men, and also why it is that some few women are role-innovative while, to date, the majority of others appear to maintain more stereotypic, traditional conceptions of female personality and behavior. Perhaps this is because women, in their femininity as a socially devalued and other-oriented group, are particularly vulnerable to the likely further social devaluation in the form of social criticism and/or ostracism for not endorsing and behaving consistently with their ostensibly appropriate gender-role, and therefore, being "deviant." This may, of course, preclude most women from even abstractly conceiving of themselves in role-innovative terms, much less actually persevering in those role-innovative options. For those fewer, but increasing numbers of role-innovative women, however, devaluative, critical feedback may not be as potentially devastating because of an hypothesized ego resilience which allows them to conceive of themselves in uniquely self-actualizing terms, and to implement these self-conceptions in spite of probable social censure.

Hypotheses

Each of the following hypotheses will be stated in terms of the null hypothesis firstly (H_0), and then in terms of the experimental or "directional" alternative (H_{E_n}).

H_0 = There is no measurably significant difference between males and females in self-devaluation, irrespective of the sex-role specificity of the task on which self-competence is presumably evaluated.

- H_{E1} = Females typically manifest significantly more self-devaluation than males, irrespective of the sex-role specificity of the task on which self-competence is presumably evaluated.
- H_0 = There is no measurably significant relationship between female role-innovativeness and self-devaluation, irrespective of the sex-role specificity of the task on which self-competence is presumably evaluated.
- H_{E2} = Role-innovative females manifest significantly less self-devaluation than role-traditional females, irrespective of the sex-role specificity of the task on which self-competence is presumably evaluated.
- H_{E3} = Role-traditional females manifest significantly more self-devaluation when evaluated on presumably more masculine tasks of competence than when evaluated on presumably more feminine tasks of competence.
- H_{E4} = Role-innovative females do not differ significantly in self-devaluation as a function of the sex-role specificity of the task on which self-competence is evaluated.
- H_0 = There is no measurably significant relationship between role-innovativeness and the degree of femininity, masculinity, or androgyny manifested psychologically by females.
- H_{E5} = Role-innovative females manifest significantly less femininity psychologically than role-traditional females, and the former group more closely

resembles males in the degree of psychological femininity manifested than they do the role-traditional females.

H_{E6} = Role-innovative females manifest significantly more masculinity psychologically than role-traditional females.

H_{E7} = Role-innovative females manifest significantly more androgyny psychologically than role-traditional females.

H_O = There is no measurably significant relationship between the degree of femininity manifested psychologically and self-devaluation in females, irrespective of the sex-role specificity of the task on which self-competence is presumably evaluated.

H_{E8} = Femininity is significantly positively related to self-devaluation in females.

H_{E9} = Females relatively high in psychological femininity manifest significantly more self-devaluation when evaluated on presumably more masculine tasks of competence than when evaluated on presumably more feminine tasks of competence.

H_{E10} = Females relatively low in psychological femininity do not differ significantly in self-devaluation as a function of the sex-role specificity of the task on which self-competence is evaluated.

H_O = There is no measurably significant relationship

between the degree of femininity manifested psychologically by females and the psychological dimension, locus of control.

H_{E11} = Females relatively high in psychological femininity are significantly more likely to be externally-oriented on the locus of control dimension than females low in psychological femininity, and the latter group more closely resembles males in the degree of externally-oriented locus of control manifested than they do the high femininity females.

The following hypotheses will be stated only in terms of the null hypothesis, since the data on which they depend are meant to be both exploratory and descriptive, and adjunctive to the experimental paradigm.

H_{O12} = There is no measurably significant difference between role-innovative and role-traditional females on various biographical indices.

H_{O13} = There is no measurably significant difference between role-innovative and role-traditional females, and males on several representative personality dimensions.

H_{O14} = There is no measurably significant difference between role-innovative and role-traditional females on self-rated attractiveness.

METHOD

Design

The experimental paradigm employed a 3 x 3 factorial design, with groups (Role-Innovative Females, Role-Traditional Females, and Males), and sex-related task (Masculine, Feminine, and Neutral), as the factors or independent variables, and the degree of self-devaluation or delta, Δ , as the dependent variable. Participants within each of the three groups were assigned to one of the ostensibly three types of sex-related task conditions. The assignment of participants, both graduate and undergraduate, within each of the three primary groups was alternated across each of the three types of tasks, in an attempt to control through balancing (McGuigan, 1968) the potentially extraneous variable of graduate/undergraduate student status. This resulted in 10 participants in each of the nine experimental treatment combinations.

The design of the overall study also incorporated descriptive, variables, some of which were experimentally related, while others were largely exploratory in nature. The experimentally related variables included the psychological components of sex-role, viz., Masculinity, Femininity, and Androgyny as assessed by the Bem Sex-Role Inventory (Bem, 1974) and locus of control as assessed by the Internal-External Locus of Control Scale (Rotter, 1966). The descriptive exploratory variables included the following major categories: a) bio-

graphical indices assessed by means of a biographical inventory; b) normal personality dimensions of interest as assessed by the Personality Research Form (Jackson, 1974); and c) female self-rated attractiveness as assessed by a self-rated attractiveness scale.

Participants

The participants (Schultz, 1969) were 30 male and 60 female upper-division and graduate students, both black and white, attending the University of Florida. The 90 participants comprising the study sample ranged in age from 18-40 years old, with a mean age of 23.59 years. All were volunteers: Those who participated in response to a research announcement posted campus-wide (Appendix A) or announced by cooperating faculty in various colleges; those who participated for psychology course credit; and those whose participation was solicited at random by telephone from available lists of college majors. Some 15 additional subjects who were also retained as participants in the study were lost at varying levels of completion through attrition due to considerations of illness, schedule conflicts, change of academic major, and experimental error.

All participants belonged to one of three groups of interest to this study. Role-Innovative Females (RIF) ($n = 30$) were those majoring in an academic/vocational field atypical for females at the University (i.e., fields in which at least two-thirds or 67% of the degrees conferred in Spring, 1975 were awarded males). These included the fields of archi-

texture, law, physical and biological sciences, forestry, engineering, business, and health sciences. Role-Traditional Females (RTF) ($\underline{n} = 30$) were those majoring in an academic/vocational field typical for females at the University (i.e., fields in which at least two-thirds or 67% of the degrees conferred in Spring, 1975 were awarded females. These included the fields of nursing, interior design, nutrition and dietetics, and elementary education. Males were those majoring in the same academic/vocational fields as the females, with an equal proportion, one-half ($\underline{n} = 15$), from each of the two previously defined role-innovative and role-traditional fields.

Study participation was limited to students of upper-division and graduate status because of presumed demonstrated ability in, and commitment to, their academic/vocational fields. There were also no significant differences in mean age for the three primary groups of interest.

Materials

The materials consisted of both experimental apparatus for the experimental portion of the study, and several paper and pencil instruments for both the experimental and descriptive portions of the study.

Experimental apparatus. The experimental apparatus was housed in a small experimental cubicle (Figure 1). The participant and the female experimenter dressed in a white laboratory coat were both seated at right angles from each other at a table. A precisely drawn line consisting of ten 3 cm angular segments (Figure 2) was mounted to the table beneath

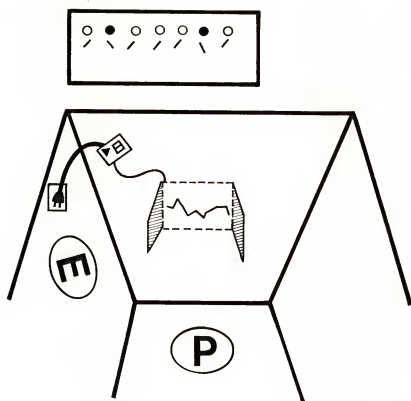


Figure 1. Experimental apparatus.

a piece of transparent plastic. A piece of circuit wire was affixed beneath the left upper edge of the mounted line drawing, and extended to a simulated hookup with a Tek Timer (Scientific Products Catalog #6490) digital readout device. The readout device was not engaged, but was plugged into an electrical outlet beneath an electrical patch panel mounted on the wall facing the participant. The toggle switches which illuminated red lights on the panel were engaged for simulation purposes. A hollow wooden shield 19 cm in height, with a 29 cm front and back opening was placed over the line drawing, so as to obscure the participant's hand and forearm as *tey*¹ attempted to trace the line in the course of the experimental trials.

The experimental task consisted of a perceptual-motor task (Fleishman, 1975) for which the "knowledge of results" (KR) via intrinsic feedback was ambiguous for a participant (Annett, 1969; McGuigan, 1959; McGuigan, Hutchens, Eason, & Reynolds, 1964). The experimental task consisted of line tracing from memory with the index finger of the participant's preferred hand, which was shielded from ter view.

¹In order to avoid the ambiguity that may arise when a masculine singular pronoun is used when a common gender reference is intended, as in this instance, a recently introduced (Miller & Swift, 1971) set of singular pronouns of indeterminate gender is used here and throughout. They are *tey*, *ter*, and *tem* which parallels the nominative, possessive, and accusative forms of plural personal pronouns.

This particular task was selected for the following reasons: its presumably sex-neutral nature, i.e., no known demonstrated sex-related stereotypy in its performance, thereby making its ostensibly "masculine," "feminine," or "neutral," sex-related ascription by the experimenter credible to the participant; its performance requires relatively non-specialized perceptual-motor ability factors, e.g., control precision, manual dexterity, spatial configuration, etc. (Fleishman, 1975); its lack of KR by means of intrinsic or kinesthetic feedback creates maximum ambiguity, thereby making the participant largely dependent upon KR via extrinsic feedback provided by the experimenter; it possesses some semblance to a simple learning task and was identified as such, making it relevant to this particular sample of participants; it is a task, the particular configuration of which the participants lacked experience or practice, thereby not contaminating their generalized performance expectancies; and it is a task demonstrated by preliminary pilot measures to be sufficiently novel and challenging to engage and maintain a participant's interest and effort over the course of sufficient experimental trials, so as to permit the experimenter's extrinsic feedback to have a cumulative impact on a participant.

The extrinsic feedback provided a participant by the experimenter was twofold: firstly, the participant was provided "bogus" quantitative feedback in the way of a relatively low performance score of 1-6 out of a possible score of 10, which was listed in random order on a 3 x 5 in. index card;

secondly, the participant was provided "bogus" qualitative feedback by means of a standard series of "devaluative" comments of increasingly disparaging content and tone regarding her experimental performance. Ordinal scales specially constructed to assess both the participant's initial experimental performance expectancy (Appendix B) and her future performance expectancy (Appendix C) were utilized in determining the degree of "self devaluation" (future performance expectancy value minus the experimental performance expectancy value).

Descriptive apparatus. The descriptive apparatus consisted of several paper and pencil instruments, some of which were mailed to the participant and completed by her prior to participating in the experimental portion of the study. These "pre-experimental" materials, largely exploratory in nature, included: a specially constructed biographical inventory; a broadly inclusive normal personality instrument, the Personality Research Form (PRF), Form A booklet and answer sheet; and a brief set of standard instructions to the participant concerning completion of the materials and subsequent experimental scheduling (Appendix D).

In addition, at the time of the experimental session, all participants initially completed experimentally-related measures in the way of the Bem Sex-Role Inventory (BSRI) and the Internal-External (I-E) Locus of Control Scale. Female participants additionally rated themselves on a specially constructed self-rated attractiveness (SRA) scale.

The biographical inventory, multiple choice and fill-in-the-blank in format (Appendix E) includes several indices concerned with demographic data, family structure and dynamics, developmental data, vocational plans, and life-style preferences.

The Personality Research Form (Jackson, 1974), Form A, is a forced choice questionnaire, and consists of 14 scales based to a large extent on Murray's (1938) "Need" system designed to measure the following: 1) Achievement; 2) Affiliation; 3) Aggression; 4) Autonomy; 5) Dominance; 6) Endurance; 7) Exhibition; 8) Harmavoidance; 9) Impulsivity; 10) Nurturance; 11) Order; 12) Play; 13) Social Recognition; 14) Understanding; and 15) Infrequency, a validity scale. The PRF is a rationally constructed personality instrument, designed to assess the domain of personality traits broadly relevant to the normal functioning of individuals in a wide variety of settings.

Each of the 15 scales of Form A consists of 20 items for a total of 300 items. Item analytic procedures indicate internal reliability estimates for the 14 scales ranging from .87 to .94 for the validating sample of college males and females, while test-retest reliability estimates for the 14 scales range from .77 to .90. The potential response biases of social desirability and acquiescence have also been minimized, by selecting items with high intra-scale correlations and low Desirability scale correlations in the former case, and by employing equal numbers of true and false keyed items in each of the scales in the latter case. Additionally, the Infrequency scale, a validity scale of sorts, permits detection of ran-

dom responding, or in some cases is thought to reflect highly idiosyncratic responses. The intercorrelations of the various scales suggest that the scales are relatively independent, with a median intercorrelation of .16 for females and .17 for males, indicating that each of the scales provides relatively unique information. Convergent and discriminant validity studies render values that are thought by the author to typically exceed those reported for personality inventories by a comfortable margin, and are thought to attest to the value of the strategy of scale construction. Profile sheets provide separate norms for males and females, and express individual scale scores as standard or normal deviate scores. Further definition and explanation of these scales are included in Appendix F.

The Bem Sex-Role Inventory (Bem, 1974) is a unique sex-role inventory in that it treats masculinity and femininity as independent dimensions, thereby providing three distinct scores. It also makes it possible to characterize an individual as basically masculine, feminine, or androgynous, in their overall sex-role orientation as a function of the difference between one's endorsement of feminine and masculine characteristics, which require an individual to describe herself on a scale from 1 (never or almost never true) to 7 (always or almost always true). An individual receives three scores: Masculinity, Femininity, and an Androgyny difference score. A person is thus sex-typed, whether masculine or feminine, to the extent that the absolute difference score

(Femininity score minus Masculinity score) is high (although a positive difference denotes femininity while a negative difference denotes masculinity), and androgynous to the extent that the absolute difference score is low. Since the Masculinity and Femininity scores are free to vary independently, the Androgyny score reflects the relative amounts of masculinity and femininity included in the individual's self-description, and as such, it best characterizes one's total sex-role. This, of course, stands in contrast to typical masculinity-femininity scales which treat masculinity and femininity as bipolar dimensions along a unidimensional M-F continuum. In addition, item selection is founded on a conception of the sex-typed person as one who has internalized society's sex-typed standards of desirable behavior for males and females. The particular personality characteristics were, therefore, selected as masculine or feminine on the basis of sex-typed social desirability rather than differential endorsement by males and females as previous inventories have done.

The instrument consists of 60 items which require an individual to indicate how well each of the 20 masculine, 20 feminine, and 20 neutral personality characteristics describes herself. Internal consistency measures for the validating sample of college males and females were .86 for Masculinity, .80 for Femininity, and .85 for Androgyny. Masculinity and Femininity scores of the BSRI have also been shown to be relatively empirically independent, with the validating college sample's correlation coefficient for males and females found

to be .11 and -.14 respectively. Males in the validating sample also score significantly ($p < .001$) higher than females on the Masculinity scale, while females score significantly ($p < .001$) higher than males on the Femininity scale. Further definition of these scales is provided in Appendix G.

The Internal-External Locus of Control Scale (Rotter, 1966) is a forced choice instrument which deals with one's belief about the nature of the world, i.e., one's expectations about how reinforcement is controlled. It consists of 29 items, and as such is a measure of generalized attitudinal expectancies in a wide variety of different situations, and is not addressed to the preference for internal or external control. It is based on the tenets of social learning theory, which state that the effect of a reinforcement following some behavior on an individual's part depends upon whether or not they perceives a causal relationship between their own behavior and the reward. When a reinforcement is perceived by the individual as following some action of their own, but not being entirely contingent upon their action, then in our culture it is typically perceived as the result of luck, choice, under the control of powerful others, and basically unpredictable or not within one's control. Such a belief is termed "external control." If, however, the individual perceives that the event is contingent upon their own behavior or their own relatively permanent characteristics, this is termed a belief in "internal control."

Split-half reliabilities for the validating sample of

college males and females equal .65 for males, .79 for females, and .73 combined. Item selection for the scale also attempted to minimize its correlation with the Marlowe-Crowne Social Desirability Scale, with correlations ranging from -.07 to -.35, and a median value of -.22 for the different samples of college students where males and females were combined. Convergent validity of the scale is reported as satisfactory by the author, while the most significant evidence of the construct validity seems to have come from numerous predictive or concurrent validity studies.

The self-rated attractiveness (Webb, Note 3) scale was specially constructed by means of Thurstone's method of attitude scale construction (Shaw & Wright, 1967). This was accomplished by having a number of judges selected by the experimenter (males and females, blacks and whites, upper division and graduate students attending the University, mean age of 24 years old, and who, therefore, resembled the study sample on several potentially relevant demographic dimensions) rate an array of 114 stimulus items. The stimuli in this case were pictures of females taken from the last issued college annual (Seminole, 63, 1973) and were rated on an equal interval scale from 1-11, including "neutral," on the underlying attitudinal dimension of "attractiveness." The median score for each stimulus item was calculated as a measure of central tendency because it is less subject than other methods to extreme scores. An interquartile range (27%-73%) or Q value was subsequently computed for each item, and those with the lowest Q value

(interjudge variability), or in the case of ties the item with the highest total endorsement score, were selected for the final SRA scale continuum consisting of 10 pictures.

Procedure

An appropriate pool of study participants was drawn from a variety of academic/vocational fields as indicated. Each volunteer participant was mailed a packet of descriptive "pre-experimental" materials (viz., biographical inventory and the PRF) to complete at home. Upon completion of these, the participant and experimenter scheduled by telephone an experimental session appointment. At the time of the experiment, the experimenter recovered the earlier completed "pre-experimental" materials from the participant. The participant was initially seated in an anteroom adjoining the experimental cubicle, and was asked to complete some additional descriptive materials (viz., the BSRI and the I-E scale). During this same period, the experimenter remained in the experimental cubicle and scored and profiled the participant's PRF and examined the biographical inventory for completeness and consistency.

The participant was then seated diagonally from the experimenter at the table containing the experimental apparatus. If the participant was female, she was asked to rate herself on the basis of attractiveness by means of the SRA scale. As the experimenter set out the pictures in order comprising the scale, the participant was told that the group of pictures represented a series of women of varying attractiveness. The

participant was instructed to assess her own attractiveness, and then, leaving the pictures in their present order, she was asked to rate herself relative to the pictures by indicating to the experimenter "where or between which two pictures" her picture should be placed on the basis of attractiveness.

Next, the participant was given the following set of standard experimental instructions to read:

This is a learning experiment. You will be asked to learn a simple task, and then you will be asked to perform it.

The equipment in front of you on the table consists of a red line drawn in TEN $1\frac{1}{4}$ inch angular segments. It is attached to the table with an automatic recording device. The gray object is a shield.

You will be asked to trace the line with your preferred index finger from memory. You will not be able to see the line or your finger tracing it, since your hand will be under the shield. Every time your finger maintains contact with any of the 10 line segments, this will be automatically recorded.

You will now be given sufficient time to study the line and practice tracing it with your finger while looking at it. When you indicate that you are "READY," you will be given FIVE blocks of 2 trials each. You will be told your score after each of the 10 trials. Your score can range from 1-10 on any trial, corresponding to the number of line segments traced by you.

The experimenter will place your finger at the beginning of the line on each trial. When you feel that you have completely traced the line, which terminates the trial, say "END." Trace across the line from left to right.

Please make sure you have read these instructions carefully, as you will NOT be permitted any further questions or discussion during the experiment.

At the conclusion of reading the experimental instructions, the experimenter interjected "Oh by the way, it may be of some

interest to you to know that this is a task which is typically performed best by (one of the following depending on the corresponding experimental condition to which the participant had been earlier assigned): 1) males; 2) females; or 3) males and females equally well (neutral)." The participant was then given an indeterminate period of time to practice while the experimenter claimed to need to check out the experimental equipment and proceeded to throw toggle switches illuminating the patch panel and rotate digital readout dials for simulation purposes in an attempt to appear sufficiently distracted so that the participant might feel less inhibited in practicing.

Upon indicating test readiness, typically a matter of several minutes, the participant was given the experimental performance rating form and was instructed to rate herself on how well they thought they would likely perform overall rather than quoting test score per se, on a scale from 1-10. The experimenter then threw a series of toggle switches, illuminating the appropriate red lights on the patch panel facing the participant, placed the shield over the line drawing, asked the participant to align test chair with specified tape markers on the floor, and placed the participant's index finger at the beginning of the line beneath the shield. The participant was instructed to "begin" simultaneous with the experimenter depressing a lever on the readout device. The experimenter held one of the index cards on which were already listed in random order a series of ten scores from 1-6, as well as an experimental script in front of her, and appeared to concentrate on these.

The index score card was placed atop the script, and the contents of neither were visible to the participant. When the participant indicated completion of a trial, the experimenter glanced at the digital readout device and simulated the recording of a score on the index card. This procedure was then repeated for each of the remaining nine trials, beginning with the placement of the participant's finger on the line. Every second trial, however, the experimenter delivered the appropriate devaluative comment from her script in the following order: 1) "Come on, surely you can do better than that!"; 2) "If I didn't know better, I'd think you hadn't understood the directions given at the outset."; 3) "Most people do better than that by this time!"; 4) "Perhaps there are some physical limitations that might account for your poor performance?"; and 5) "Oh well, let's give this task up and call it a bad day!" The participant occasionally made a retort which the experimenter attempted to overlook. The participant was then given a future experimental rating form to complete, while the experimenter extinguished the panel lights.

The participant was finally provided an experimental debriefing by the experimenter, who subsequently proceeded to give the participant constructive feedback on ter PRF profile.

RESULTS

The study data were, as described earlier, basically of two types, i.e., experimental and descriptive, with the latter including both experimentally-related and exploratory measures. The organization of the results section will reflect this.

Experimental Variables

The mean and standard deviations of the initial experimental performance expectancy scores for each of three groups on each type of sex-related task are shown in Table 1. A 3 x 3 factorial analysis of variance was performed for the initial experimental performance expectancy values. The factors were group (RIF, RTF, Male) and sex-related tasks (Masculine, Feminine, Neutral), and neither the main effects, sex-related tasks (ST), $F(2,81) = .40$, groups (G), $F(2,81) = .91$, nor their interaction, ST x G, $F(4,81) = 1.86$, were found to attain the conventional .05 level of statistical significance. Apparently, the participants within each treatment combination were relatively homogeneous in their experimental performance expectancy scores prior to being experimentally administered the bogus devaluative feedback.

The means and standard deviations of self-devaluation or delta values (future performance expectancy value minus experimental performance expectancy value) for each of the three groups on each type of sex-related task are shown in Table 2.

Table 1

Means and Standard Deviations of Group Experimental
Performance Expectancy Scores
for Sex-Related Tasks

Group	Masculine		Sex-Related Task Feminine		Neutral	
	Mean	SD	Mean	SD	Mean	SD
RIF	6.10	.88	5.90	1.37	5.10	1.66
RTF	5.60	1.65	5.70	1.89	7.00	.82
Male	6.10	1.52	6.00	2.11	6.50	1.35

Table 2
Means and Standard Deviations of Group Devaluation
Scores for Sex-Related Tasks

Groups	Sex-Related Task					
	Masculine		Feminine		Neutral	
	Mean	SD	Mean	SD	Mean	SD
RIF	8.30	1.16	8.10	1.37	10.20	1.62
RTF	9.60	2.12	9.60	1.17	8.10	1.10
Male	9.60	1.58	8.70	1.89	8.70	1.89

Note. Self-devaluation scores represent future performance expectancy value minus experimental expectancy value, with added constant of 10. Therefore, higher devaluation scores signify less actual devaluation.

It should be noted that the higher the mean self-devaluation value, the less the actual degree of self-devaluation, since a constant of ten was added to all scores in order to make all values of delta positive. The grand mean value of delta across all treatment combinations without this constant value of ten added was minus one (-1), indicating an overall experimentally induced devaluation effect. Bartlett's test for homogeneity of variance (Kirk, 1968) was performed for these devaluation data, indicating homogeneity of the population variances, $\chi^2(8) = 7.87$, $p < .50$. A 3 x 3 factorial analysis of variance on the same variables is summarized in Table 3. The results shown in Table 3 indicate that neither of the main effects, group (which includes ascribed biological sex, male or female, as well as female role-innovativeness or female role-traditionality) or sex-related task was significant, although their interaction, ST x G was highly significant, $F(4,81) = 4.52$, $p < .002$.

In light of the significant ST x G interaction found, a test for simple main effects was then computed, so as to discern between which of the factorial treatment combinations potentially significant differences existed. Table 4 summarizes the analysis of variance for the simple main effects of the group factor for each type of sex-related task, and the sex-related task factor for each type of group. Post-hoc tests for significant differences among means were subsequently computed by Tukey's HSD test (Kirk, 1969) for those simple main effects found significant (Tables 5 and 6).

Table 3
 Analysis of Variance of Group-Devaluation Scores
 for Sex-Related Tasks

Source	df	MS	<u>F</u>	<u>P</u>
Sex of Task (ST)	2	1.011	.40	NS
Groups (G)	2	.411	.16	NS
ST x G	4	11.311	4.52*	<.002
Within Cell	81	2.505		
Total	89	15.238		

Table 4

Analysis of Variance of Simple Main Effects of
Group Devaluation Scores for Sex-Related Tasks

Source	df	MS	F	p
Group	2	.411	.16	NS
G for ST _{Masculine}	2	5.635	2.25	NS
G for ST _{Feminine}	2	5.700	2.28	NS
G for ST _{Neutral}	2	11.700	4.67* $< .05/3 = .017$	
Sex-Related Task (ST)	2	1.011	.40	NS
ST for G _{RIF}	2	13.435	5.37* $< .05/3 = .017$	
ST for G _{RTF}	2	7.500	2.99	NS
ST for G _M	2	2.700	1.08	NS
ST x G	4	11.311	4.52* $< .002$	
Within Cell	81	2.505		
Total		61.618		

Table 5

Tukey's HSD Test: Group (G) Comparisons for
the Neutral Sex-Related Task (ST_{Neutral})

Group	Mean	Pairwise Mean Differences		
		RTF	Male	RIF
RTF	8.10	-	.60	2.10*
Male	8.70		-	1.50
RIF	10.20			-

* $p < .05$

Table 6

Tukey's HSD Test: Sex-Related Task (ST)
 Comparisons for the RIF Group (G_{RIF})

Sex-Related Task	Mean	Pairwise Mean Differences		
		Feminine	Masculine	Neutral
Feminine	8.10	-	.20	2.10*
Masculine	8.30		-	1.90*
Neutral	10.20			-

* $p < .05$

Figure 3 graphically depicts the nature of the interaction between the two main effects, group and sex-related task. When this figure is viewed in conjunction with the data of Tables 4, 5, and 6, a number of things become apparent. Firstly, it seems that the experimentally hypothesized greater self-devaluation of females than of males was not supported, as evidenced in the statistically insignificant group factor main effect of Table 4. Also, the experimentally hypothesized greater self-devaluation of RTF's than that of RIF's, irrespective of the sex-related task was not supported, with reference once again to the group factor main effect of Table 3. However, in light of the highly significant ($p < .002$) group by sex-related task interaction and the resultant significant ($p < .017$) simple main effects of Table 4, the interpretation of the tests of simple main effects as in the latter hypothesis must be qualified. More specifically, as Figure 3 and Table 5 point up, RTF's manifested significantly ($p < .05$) more self-devaluation than RIF's on Neutral sex-related tasks only. Secondly, further examination of Figure 3 along with consideration of the ST for G_{RTF} term of Table 4 also reveals that the experimentally hypothesized greater self-devaluation of RTF's on Masculine sex-related tasks than on Feminine sex-related tasks was not supported. Thirdly, the experimentally hypothesized lack of significant differences in self-devaluation as a function of the type of sex-related task for RIF's was not supported. However, Figure 3 when considered this time with Table 6 indicates that RIF's manifested significantly ($p < .05$) less self-devaluation on Neutral sex-related

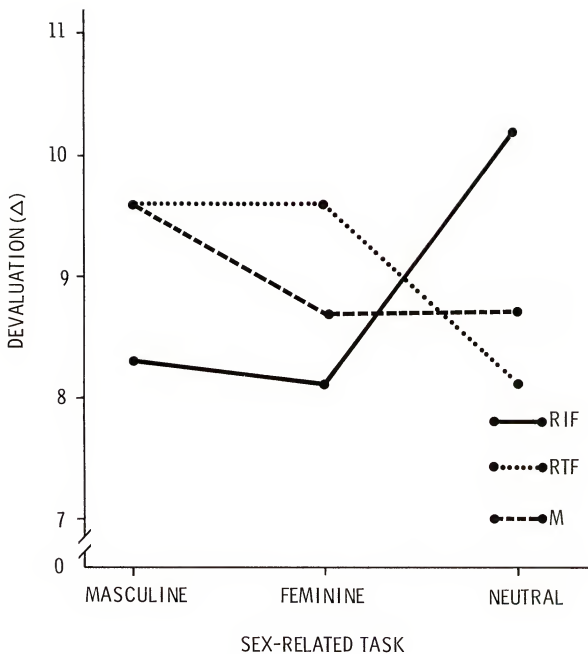


Figure 3. Mean devaluation for groups as a function of sex-related task condition.

tasks than on either Masculine or Feminine sex-related tasks.

In sum then, the results of the experimental data revealed that at the outset of the experiment, prior to the experimental induction of the self-devaluation effect, the subjects within each of the group by sex-related task treatment combinations did not significantly differ and were, therefore, relatively homogeneous as to their initial experimental performance expectancy scores. Furthermore, upon the experimental administration of devaluative feedback, an overall experimentally induced self-devaluation effect of the average magnitude of minus one on a ten point rating scale across all participants was evidenced.

There were no significant differences in self-devaluation for either of the main effect factors, group or sex-related task. There was, however, a highly significant interaction of these factors. The added required interpretation of this group by sex-related task interaction was made apparent by significant simple main effects of the group factor for the Neutral sex-related task and the sex-related task factor for the RIF group, and their respective post-hoc comparisons. As a result of all these analyses, it was demonstrated that the hypothesized greater self-devaluation of females than of males was not supported. Nor was the hypothesized significantly greater self-devaluation of RTF's than that of RIF's irrespective of the type of sex-related task supported, but rather, required qualification. That is to say, that RTF's manifested significantly more self-devaluation than did RIF's on Neutral

sex-related tasks only. Additionally, the hypothesized significantly greater self-devaluation of RTF's on Masculine sex-related tasks than on Feminine sex-related tasks was not supported. And finally, the hypothesized lack of significant differences in self-devaluation as a function of the type of sex-related task for RIF's was not supported. But rather, the RIF's were found to manifest significantly less self-devaluation on Neutral sex-related tasks than on either Masculine or Feminine sex-related tasks.

Descriptive Variables: Experimentally-Related

BSRI Masculine, Feminine and Androgynous sex-role components. Analyses of variance comparing the three groups, RIF's, RTF's, and Males on the three scale scores of the BSRI, i.e., Masculinity, Femininity, Androgyny, were performed. Significant mean differences between the three groups were found only with the Masculinity scale scores, $F(2,87) = 3.85$, $p < .05$, but not with the Femininity scale scores, $F(2,87) = 2.99$, NS, or the Androgyny scale scores, $F(2,87) = 2.78$, NS. Thus, the experimentally hypothesized significantly greater psychological manifestation of Femininity for RTF's than for RIF's, with the latter ostensibly more closely resembling Males on this dimension was not supported. While there were no statistically significant differences demonstrated among the three groups with the Femininity scale scores, the relative rank-order of the means, in ascending order was consistent with expectations, i.e., Males < RIF's < RTF's.

In light of the significant one-way analysis of variance for the Masculinity scale scores, Tukey's HSD post-hoc test

for pairwise comparisons among means (Table 7) was performed, indicating that only the mean difference between the Males and RTF's was statistically significant at the .05 level, with the Males exceeding the RTF's on the Masculinity dimension. While the experimentally hypothesized significantly greater psychological manifestation of Masculinity for RIF's than for RTF's was not supported, it is, nevertheless, interesting to note the relative rank order of means for the three groups in ascending order, which was consistent with expectations, i.e., RTF's < RIF's < Males.

Although it was experimentally hypothesized that the RIF's were significantly more androgynous than the RTF's, and while this was not confirmed, the relative rank-order of the three groups' mean absolute Androgyny scale scores is noteworthy in that the RIF's manifested the least overall sex-typing and were, therefore, the most androgynous, followed by the Males, and lastly, the RTF's.

Table 8 shows the mean values for the three groups on these sex-role components and also provides for comparison of the study samples' mean BSRI scale scores and standard deviations with those of the normative college sample (Bem, 1974) for males (\underline{n} = 444) and females (\underline{n} = 279) respectively. It also contains the Androgyny t-ratios for each of the groups, whose values were calculated by multiplying the Androgyny score (mean Femininity score minus mean Masculinity score) by the conversion factor of 2.322, so as to approximate the t-ratio for Bem's (1974) normative university sample.

Table 7

Tukey's HSD Test: BSRI Masculinity Scale Score
Comparisons Among Primary Groups

Group	Mean	Pairwise Mean Differences		
		RTF	RIF	Male
RTF	4.59	-	.15	.56*
RIF	4.74		-	.42
Male	5.15			-

* $p < .05$

Table 8

Means and Standard Deviations of BSRI Scale Scores for
the Study Sample and the Normative Sample

	Study Sample				Normative Sample							
	RIF		RTF		Male		Males		Females			
BSRI Scale	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD		
Masculinity	4.73	.88	4.59	.84	5.15	.71	4.97	.67	4.57	.69		
Feminity	4.90	.47	5.15	.57	4.82	.55	4.44	.55	5.01	.52		
Androgyny	.17	1.05	.56	1.10	-.33	.81	-.53	.82	.43	.93		
Androgyny t-ratio	+40		+1.30		-.77		-1	.28	+1.10			

Suggested cut-off points for the relative sex-type classification of individuals in terms of the Androgyny \underline{t} -ratio (Bem & Korula, Note 4) are represented by the following values:

$\underline{t} > 2.025$	Feminine
$\underline{t} \geq -1.0$ and ≤ 1.0	Androgynous
$\underline{t} < -2.025$	Masculine

Reference to the Androgyny \underline{t} ratio mean values of Table 8 when considered in conjunction with these normative, suggested cut-off points indicates that both the Males and the RIF's would be considered androgynous, while the RTF's are somewhat indeterminate, but closer to an androgynous than feminine classification, perhaps best typified by the "near feminine" classification suggested by Bem and Korula (Note 4).

The experimentally hypothesized positive linear relationship between the psychological dimension of Femininity and self-devaluation in females was tested by means of a Pearson product-moment correlation. The correlation found between the BSRI Femininity scale scores and degree of experimentally induced self-devaluation or delta in females was on the order of $\underline{r} = -.42$, $df = 58$, and did not attain the conventional .05 level of statistical significance.

All females ($\underline{n} = 60$) were then rank-ordered from high to low along a Femininity continuum on the basis of their BSRI Femininity scale scores and the tails of this distribution or the extreme groups were selected for further analysis. More specifically, approximately the top and bottom thirds of this distribution were designated High Femininity ($\underline{n} = 21$,

Femininity scale score range = 5.30-6.15) and Low Femininity ($n = 20$, Femininity scale score range = 3.95-4.75) respectively.

The experimentally hypothesized significantly greater self-devaluation of High Femininity females when evaluated on more Masculine sex-related tasks than on more Feminine sex-related tasks was not supported when a one-way analysis of variance was performed on the delta scores of the High Femininity females for the three types of sex-related tasks, $F(2,18) = .08$, NS. Although no statistically significant differences were found on the BSRI Femininity scale scores among any of the three groups, RIF's, RTF's, and Males, as noted earlier, it is somewhat interesting that the group composition of the High Femininity females was over half or 62% FRT's. And so it is, too, for the Low Femininity females that predictably more, or 60% in the case of this group's composition, was derived from RIF's. Fisher's z -test (Guilford, 1965) for differences between uncorrelated proportions demonstrated that the proportions of RIF's and RTF's respectively found within the High and Low Femininity female groups did not differ significantly, $z = 1.41$, $p = .16$. In addition, the experimentally hypothesized lack of significant differences in self-devaluation for Low Femininity females as a function of the type of sex-related task was supported when a one-way analysis of variance performed on the delta scores of the Low Femininity females for the three types of sex-related tasks failed to find any significant differences, $F(2,17) = 1.18$, NS.

I-E locus of control dimensions. The I-E scale scores for the High and Low Femininity groups of females and the intact group of Males were compared by means of a one-way analysis of variance in order to test the experimentally hypothesized significantly greater E locus of High Femininity females than that of Low Femininity females, with the latter group ostensibly more closely resembling the Males on this dimension. The analysis indicated a highly significant difference between these groups $F(2,68) = 8.26, p < .01$. Tukey's HSD post-hoc test for pairwise comparisons among means (Table 9) indicated that contrary to the experimentally hypothesized predictions, High Femininity females were not found to be significantly more externally oriented in their locus of control than the Low Femininity females, with the latter ostensibly more closely resembling the Males on this dimension. But rather, the mean difference between Low Femininity females and Males on E locus was statistically significant at the .05 level, with Low Femininity females significantly exceeding the Males. It is, however, also interesting to note in passing that while the only statistically significant difference on the E locus dimension was not between the groups predicted, perhaps as might yet be predicted, both groups of females did exceed the Males in their E locus or "external" orientation. Since E locus and I locus scores are complementarily related, then, just as the Low Femininity females significantly exceeded the Males on the E locus of control dimension, it can also be demon-

Table 9

Tukey's HSD Test: E Locus of Control Comparisons
Among High and Low Femininity Female, and Male Groups

Group	Mean	Pairwise Mean Differences		
		Males	High FEM Females	Low FEM Females
Males	7.97	-	2.55	4.13*
High FEM Females	10.52		-	1.58
Low FEM Females	12.10			-

*p < .05

strated conversely that Males significantly exceeded the Low Femininity females on "internality" or I locus of control.

The disparity in E locus between the females (High and Low Femininity groups), and the Males, was further highlighted when a one-way analysis of variance also compared the three primary groups, RIF's, RTF's, and Males on the E locus of control dimension. A highly significant difference was found between these three groups, $F(2,87) = 7.91, p < .01$. Tukey's HSD post-hoc test for pairwise comparisons among means (Table 10) confirmed, once again, that both groups of females, the RIF's and RTF's, were significantly ($p < .05$) more E oriented than the Males, and conversely, the Males were significantly more I oriented than either group of females.

In sum, the results of the experimentally-related descriptive data revealed several things about Masculinity, Femininity and Androgyny as psychological sex-role components, as well as the locus of control dimensions, externality and internality, and the different ways that all these descriptive personality variables seem to be related to the manipulated experimental variables.

The BSRI Masculinity scale scores, but not those for Femininity and Androgyny, were found to significantly discriminate between the three groups of interest, RIF's, RTF's and Males. The experimentally hypothesized significantly greater psychological manifestation of Femininity for RTF's than for RIF's, with the latter more closely resembling Males on this dimension was not supported. Nor was the hypothesized significantly greater psychological manifestation of Masculinity and

Table 10

Tukey's HSD Test: E Locus of Control Comparisons
Among Primary Groups

Group	Mean	Pairwise Mean Differences		
		Male	RIF	RTF
Male	7.97	-	3.03*	3.53*
RIF	11.00		-	.50
RTF	11.50			-

* $p < .05$

Androgyny for RIF's than for RTF's confirmed.

The hypothesized positive linear relationship between the psychological dimension of Femininity and self-devaluation in females was not confirmed. When devaluation patterns for High and Low Femininity female groups were examined in reference to various sex-related conditions the hypothesized significantly greater self-devaluation of High Femininity females when evaluated on more Masculine types of sex-related tasks than on more feminine sex-related tasks was not confirmed. However, the hypothesized lack of significant differences in self-devaluation scores for Low Femininity females as a function of the type of sex-related task on which evaluated was confirmed.

Like the BSRI Masculinity scale, the I-E locus of control scale scores were also found to significantly discriminate between groups. The groups compared this time were once again the High and Low Femininity female groups and the intact group of Males. The hypothesized significantly greater E locus of High Femininity females than that of Low Femininity females, with the latter group ostensibly more closely resembling the Males on this dimension, was not confirmed. Instead, the Low Femininity females significantly exceeded the Males in E locus, and conversely, the Males significantly exceeded the Low Femininity females in I locus of control.

Descriptive Variables: Exploratory

Female self-rated attractiveness. Analysis of the SRA data for the two groups of females, RIF's and RTF's with a two-tailed t-test revealed no statistically significant mean differences on "attractiveness," $t(57) = 1.03$, NS.

PRF personality dimensions. The means and standard deviations of scale scores for each of the three groups, RIF's, RTF's, and Males, on each of the 14 PRF scales are shown in Table 11. These scale values represent standard scores based on the author's (Jackson, 1974) normative college samples for females ($n > 1000$) and males ($n > 1000$) respectively.

On overall multivariate analysis of variance comparing the three groups, RIF's, RTF's and Males on the combined 14 personality scales of the PRF (excluding Scale 15, "Infrequency," a validity scale) was statistically significant, $F_{MV}(28, 148) = 1.57$, $p < .05$. Univariate analyses of variance were subsequently performed in order to determine which of the numerous scales significantly discriminated among the three groups. Significant mean differences among the three groups were found with two of the 14 scales, viz., the Affiliation and Aggression scales. The one-way analysis of variance comparing the three groups on the Affiliation scale was found to be highly significant, $F(2,87) = 5.93$, $p < .01$. Tukey's HSD post-hoc test for pairwise comparisons among means (Table 12) pointed up two differences statistically significant at the .05 level. Surprisingly, the Males were found to be significantly more affiliative than either the RIF or RTF groups.

Table 11
Means and Standard Deviations of Group PRF Scale Scores

Scale	Groups					
	RIF		RTF		Male	
	Mean	SD	Mean	SD	Mean	SD
1) Achievement	55.93	10.34	57.17	10.27	57.93	10.78
2) Affiliation	47.57	9.17	45.97	7.97	53.27	8.71
3) Aggression	50.50	8.36	49.23	9.90	40.80	10.43
4) Autonomy	57.33	8.28	55.90	8.23	54.87	9.80
5) Dominance	53.57	13.45	53.07	10.06	50.20	10.12
6) Endurance	55.17	8.95	56.63	9.47	58.60	7.90
7) Exhibition	52.57	11.50	50.47	10.00	51.27	11.29
8) Harmavoidance	50.03	8.68	53.00	10.37	51.20	10.30
9) Impulsivity	53.43	9.73	52.23	10.03	48.63	11.36
10) Nurturance	51.47	10.02	52.07	11.05	57.37	10.87
11) Order	48.70	11.27	53.87	10.89	50.40	9.43
12) Play	50.30	12.25	49.20	11.10	49.47	10.84
13) Social Recognition	46.37	9.29	47.27	10.48	42.30	6.17
14) Understanding	53.53	10.18	54.30	10.26	54.33	8.75

Note. Scale values expressed as standard scores based on normative college samples for males and females respectively (Jackson, 1974).

Table 12

Tukey's HSD Test: PRF Affiliation Scale Score
Comparisons Among Primary Groups

Group	Mean	Pairwise Mean Differences		
		RTF	RIF	Male
RTF	45.97	-	1.60	7.30*
RIF	47.57		-	5.70*
Male	53.27			-

* $p < .05$

The one-way analysis of variance comparing the three groups on the Aggression scale was also found to be highly significant, $F(2,87) = 9.05$, $p < .01$. Tukey's HSD post-hoc test for pairwise comparisons among means (Table 13) demonstrated two statistically significant ($p < .05$) mean differences. Once again rather surprisingly, both the RTF and RIF groups were found to be significantly more aggressive than the Males. The raw score differences between the male and female groups on each of these scales were also found to be in the same relative directions as the standard score differences. Nevertheless caution is in order in interpreting the significant standard score differences between the male and female groups, since they are based on differing sex-specific normative populations.

In an attempt to ascertain whether there might be any further ramifications in the way of personality factors other than those posited earlier in conjunction with the experimental paradigm to account for the self-devaluation phenomenon among females, several of the 14 PRF scales on which differences seemed intuitively and/or theoretically likely were explored. Towards this end, all females ($n = 60$) were rank-ordered from high to low along a continuum on the basis of their "self-devaluation" scores, and the tails of this distribution or the extreme groups of approximately the top and bottom sixths of the distribution were selected for comparison by means of one-tailed t-tests. The High Self-Devaluation female group ($n = 11$) had delta scores ranging

Table 13

Tukey's HSD Test: PRF Aggression Scale Score
 Comparisons Among Primary Groups

Group	Mean	Pairwise Mean Differences		
		Male	RTF	RIF
Male	40.80	-	8.43	9.70*
RTF	49.23		-	1.27*
RIF	50.50			-

* $p < .01$

from 6-7, while the Low Self-Devaluation female group ($n = 9$) included delta scores ranging from 11-13. Although it seemed probable that the Low Self-Devaluation females would significantly exceed the High Self-Devaluation females on the selected scale dimensions of Achievement, Aggression, Autonomy, Endurance, and Dominance, while the High Self-Devaluation females would significantly exceed the Low Self-Devaluation females on the scale dimension of Harmavoidance and Affiliation, only one of these comparisons was statistically significant. Only the Dominance scale significantly discriminated between the High and Low Self-Devaluation female groups, with the Low Self-Devaluation group significantly exceeding the High Self-Devaluation group, $t_{(18)} = 1.79$, $p < .05$.

Biographical indices. The response alternative frequencies of the two groups of interest, the RIF's and the RTF's, for each of some 34 categorical items of the biographical inventory were examined for significant differences by means of chi-square analyses. Of the remaining four items, items 12 and 31 were analyzed with two-tailed t -tests, while items 19 and 34 lent themselves more appropriately to computation of descriptive statistics, i.e., mean and range values. None of the chi-square analyses revealed any statistically significant differences at the conventional .05 level between these two groups. Neither of the t -tests computed for items 12 and 31, $t_{(58)} = .12$ and $t_{(58)} = .13$ respectively, were statistically significant at the .05 level. Specific response alternative frequencies and mean and range values, where

appropriate, of both groups for each inventory item are summarized in modified inventory form in Appendix H.

The most prominent trends in the way of item alternative response ratios for the two groups can also be descriptively highlighted here. For example, reference to those items concerned with parental family structure and dynamics indicates that both the RIF and RTF groups came from "fairly average" families in the way of about three children in each of their families. One-half of the RIF were "first" or "only born children," while about one-third of the RTF were. Apparently, a majority of both groups came from "intact families," also describing their family atmosphere as "basically harmonious while they were growing up." Approximately one-half of both the RIF and RTF groups perceived "both" of their parents as equally dominant in the family constellation, with "Mother" seen as next most dominant member. "Mother" or "Father" were cited essentially equally often by both the RIF and RTF groups as the "parent most identified with (most alike)," with, however, twice as many RIF's as RTF's identifying with "both equally." The relative rank order of the parent cited most often as the "parent(s) typically gotten along with better" for the RIF and RTF is rather interesting. The RIF's cited "Mother" most frequently, followed by "both," and "Father" least frequently. However, a majority of both the RIF and RTF groups indicated "Mother" as the parent they are "closer to presently," followed by "both equally," and then "Father."

Insofar as parents' education, half of the fathers of both

the RIF and RTF groups had no college degree, and similarly, half of the mothers of both groups also had no college degree. So it is, that for several of the RIF's and RTF's, they may well be the first generation in their family to earn a college degree. Parental education and occupation are frequently considered some of the best indications of socioeconomic status. In this regard, it seems noteworthy that half of the fathers of RIF's were "professionals," while half of the fathers of RTF's were "white collar workers." Taken in toto, a majority of the fathers of both the RIF and RTF groups were either "white collar workers" or "professionals." Approximately one-half of the mothers of both the RIF and RTF groups were "housewives" most of while their daughters were growing up. Of those mothers of both the RIF and RTF groups who were ever employed outside the family home, approximately one-half of them were "professionals." Overall, it can be said that a majority of the mothers of both the RIF and RTF groups, who also were ever employed outside the family home, were either "white collar workers" or "professionals." The mothers of RIF's who had ever worked outside the family home worked just slightly longer on the average than the mothers of RTF's. The vast majority of mothers of both the RIF and RTF groups who were ever employed outside the family home were perceived by their daughters as having "enjoyed" their work, thereby apparently maintaining and conveying a positive attitude. In addition, it seems that the majority of the husbands of the mothers of both the RIF's and RTF's were also perceived by

their daughters as approving of Mother's employment. The mothers of both the RIF and RTF groups were also perceived by their daughters to have typically sought employment for reasons of "self-fulfillment" and/or "economic necessity," rather than for some otherwise "undefined" reasons.

As regards "mothers' current employment status" about half of the mothers of both the RIF and RTF groups were presumably employed, and of those, a majority of the mothers of both the RIF and RTF groups were employed in feminine stereotypic fields, e.g., library science, nursing, secretarial, office, social work, or elementary teaching.

The apparent basis for the occupational choices of both the RIF and RTF groups were, in descending order of frequency of endorsement: 1) "personal satisfaction;" 2) "security (economic);" and 3) "altruistic." Both the RIF and RTF groups more frequently indicated "parents" rather than a variety of potentially significant others as inspiring or enabling them to persevere in their occupational choice, with "peers," "college faculty," and "beau/spouse" item alternatives endorsed about equally often. Nevertheless, most of both the RIF and RTF group members indicated that "neither" of their parents had specifically suggested their occupational choice to them, although the vast majority of both the RIF and RTF groups feel that their "Mother" and "Father" approve of and encourage their daughters in their occupational choice. It is also of interest to note that most of the RIF and RTF group members feel "understood" by their mothers. And while most RTF's feel understood by their fathers as well, yet about half and equal

numbers of the RIF's feel "understood" by their fathers as feel "not understood."

Most RIF's and RTF's in growing up were more concerned with "having friends and being liked" (affiliation) than with "mastery." Both the RIF's and RTF's now as young adults were in the main essentially equally committed to their chosen occupations, with both groups' mean level of stated commitment equal to a value of four on a scale of one to five. Personal lifestyle plans for most of the RIF's and RTF's include "marriage" and "children" foremostly, followed by "cohabitation," and then remaining "single" for the RIF's, while the RTF's have reversed that order, with remaining "single" and then "cohabitation" as their relative preferences. Of those who presently plan to have or adopt children, the RIF's would like just slightly over three children on the average, while the RTF's are slightly less inclined, averaging somewhere between two and three children. Another dimension of these personal lifestyle plans and preferences have to do with occupational activity. Once again, a majority of both the RIF's and RTF's plan on working "full-time," and most feel "no potential conflict between fulfilling themselves as wives and mothers, and also fulfilling themselves as individuals."

To begin summarizing the results of the exploratory descriptive data, an overview of normal functioning personality data for the entire sample of participants with the PRF revealed that the only two of several personality scale factors on which the three groups differed were the Aggression and Affiliation scales. Unexpectedly, the Males were found to be

significantly more affiliative than either of the female groups, RIF's or RTF's, and both groups of females, RIF' and RTF's were found to be significantly more aggressive than the Males.

In an attempt to explore this domain of general personality factors for other variables that may have potentially figured into the posited self-devaluation phenomenon in a cause-effect or mediating way, the extreme groups of the self-devaluation score distribution for females were selected for comparison on a number of intuitively and/or theoretically plausible personality variables. While it was posited that these two selected groups, High and Low Self-Devaluation females, would likely differ significantly on the Achievement, Aggression, Autonomy, Endurance, Dominance, Harmavoidance, and Affiliation scales, none but the Dominance scale significantly discriminated between the two groups. As predicted, the Low Self-Devaluation females manifested significantly more Dominance than the High Self-Devaluation females.

The two female groups of interest, the RIF's and RTF's were also compared on a number of dimensions. The self-rated attractiveness measure demonstrated no significant difference between these two groups on the "attractiveness" dimension. Nor were there any statistically notable differences between them on a number of biographical indices, although the bulk of the measures were useful and interesting as simply descriptive rather than discriminative of the RIF's and RTF's.

DISCUSSION

Study Sample Description

Consideration of the study data generally for the three primary groups of interest, the RIF, RTF, and Male groups, reflects several things about the overall composition of the study sample. Firstly, examination of the personality data for the 14 scales of the PRF for these three primary groups (Table 11) would seem to attest to the apparent relative homogeneity of the study sample, with a very few, but perhaps quite interesting and surprising exceptions. Before touching upon the exceptions, it might be meaningful to further highlight the PRF data. Further corroborating the relative homogeneity of the sample, a brief profile analysis indicates that the scores for the Achievement, Autonomy, and Endurance scales, although varying somewhat in their relative rank order, were the three highest scale scores for both the RIF and RTF groups. Moreover, two of these high scale scores for the females, those of the Achievement and Endurance scales, were two of the three highest for the Males, with Nurturance being the third of the highest scale scores for the Males. The lowest relative scale scores for each group are also noteworthy in passing, with that of Social Recognition for the RIF's, Affiliation for the RTF's, and Aggression for the Males. As for other significant exceptions to the relative homogeneity

otherwise among the three groups on the PRF, both groups of females, the RIF's and the RTF's, were found to significantly exceed the Males in Aggression, while the males were found to significantly exceed the females in Affiliation.

Some heterogeneity was evidenced, however, on yet other personality variables, with the I-E locus of control variables among them as shown in Table 10. Both groups of females, the RIF's and RTF's, were found to significantly exceed the Males in their external orientation or E locus in their general attribution of responsibility for what happens to them in the course of their lives, and conversely, the Males were found to significantly exceed both groups of females in their internal orientation or I locus. It should be pointed out that the mean E locus values for the two female groups were, in each case, comparable to those of the normative college sample currently, on the order of 10-12 (Rotter, 1975), while that of the Male group was quite a bit discrepant (approximately 8).

Both homogeneity and heterogeneity were evidenced with the BSRI sex-role components. More specifically, no significant differences were found among the three groups on the Femininity or Androgyny scales, but significant differences were found with the Masculinity scale of Table 7, with the Males found to significantly exceed the RTF's in masculinity. All three groups might be considered relatively androgynous in their overall sex-typing when their Androgyny scores are compared by means of t-ratios with the normative college sample (Table 8), perhaps allowing for some deviation on the part of the RTF group, whose overall sex-typing might be more accurately

typified as inderterminate, or near feminine rather than strictly androgynous when the normative sex-type classification categories are utilized.

Historical antecedents and future implications. What can be said, then, generally for the sample as a whole in light of these demographic and normal personality data? To begin with, by reasons of age, it could be said that the participants were most likely born in the 1950's, primarily the early 50's, and likely represent similar age and cohort group developmental influences. They comprise a portion of a generation that was the last gasp of the post-war baby boom, an upsurge in the birth rate that continued until about 1957 (Bernerd, 1968). In addition to generational considerations for the participants themselves, it must also be appreciated that the 50's was also the era of the "feminine mystique," a psychoanalytically derived doctrine that decreed that one could only be a woman through having children, while those who sought self-fulfillment outside the home were a "lost sex" (Bernard, 1968). These were the cultural forces in sway, which the mothers of participants, particularly, and their families, generally, had to cope with, including the potential implications for the participants as their offspring. Unfortunately as Bernard (1968) reminds us, the concomitants of this "motherhood mania" were a decline in graduate studies, in career aspirations, and in participation in the business of the world generally for females. After this time, with the disquieting 60's came the questioning of the previously tacit

assumptions concerning women's (and necessarily men's) "proper" role, and what's more, women's rights. It, no doubt, is also noteworthy that the attainment of adolescence for these participants, that "critical period" which, in the past has been implicated as the point where many a potentially would-be-achieving, young adult female has ostensibly succumbed to a confluence of "feminizing" factors, e.g., peer group pressures, parental expectations (Bardwick, 1971; Douvan & Adelson, 1966; Maccoby, 1966), was also coincident with the mid 60's. This period witnessed the increasing trend toward obliteration of the distinction between the sexes in privileges, prerogatives, and responsibilities and, instead, the emphasis was upon "their common status as human beings rather than their different statuses as males and females" (Bernard, 1968, p. 14).

All of these developmental, social milieu considerations when coupled with the potentially androgynizing influences of the co-educational university experience may well help to explain much of the apparent relative homogeneity of the study sample on several relevant dimensions assessed, both when the sample is conceived of in terms of ascribed biological sex, male or female, and also in terms of major life-organizing role options, i.e., academic/vocational role-innovativeness or role-traditionality.

This analysis of the apparent relative homogeneity of the study sample must also allow for the added possibility of what appears to be perhaps some limited cross-sex adaptation,

with the females found to be significantly more aggressive than the males, and the males found to be significantly more affiliative than the females. Lunneborg and Rosenwood (1973) have similarly found what they describe as declining sex differences among today's college students, particularly as pertains to the stereotypic qualities of need affiliation in females and need achievement in males. These investigators found that while the assessed differences between college males and females on these two motivational needs were in line with traditional, more stereotypic expectations, nevertheless, only one of four statistical tests of differences between the two sexes on the two needs was significant; thereby permitting them to conclude that sex-stereotypes, at least in regard to these psychological dimensions, are changing in the college population, with men apparently becoming more concerned with interpersonal relationships and women with pride in school and work accomplishments. Perhaps the same might be said for aggression and affiliation as stereotypic personality dimensions, the greater or lesser manifestation of which does not seem to be the exclusive domain of one sex or the other.

There is, however, another possible, and perhaps equally probable explanation for the relative homogeneity observed in the study sample. It may well be that those individuals who chose to participate in the research were, by the very fact of their self-selection as volunteers, more alike than they were the unsampled non-volunteers. This, of course, introduces the very real possibility of sampling bias, which has plagued re-

searchers in the social sciences and unfortunately cannot be readily discounted here either.

As mentioned, there was not complete homogeneity among the sample as a whole, for example, on the locus of control, or Masculinity sex-role scale dimensions. It would appear that these females, not altogether unpredictably, were still significantly less internally oriented than these males in their perceptions of their possible control over their environment and its happenings relative to their personal fate. It also seems that the earlier alluded to social learning experiences for females surrounding the issues of dependency, passivity, and being "other-oriented" in gratifying their needs for self-esteem, continue to exert their influence, as reflected in the locus of control dimension.

The implications of the largely external cognitive attributions made by females for what transpires in their lives, particularly as it relates to achievement-oriented behavior, has been well documented by Frieze (Note 5). As she points out, "within the achievement domain, the causal attributions one makes have implications for one's expectations, degree of pride and shame experienced, and future behavior undertaken" (p.3). According to Frieze (Note 5) it can be said that higher expectancies for personal success are held by males than females, and males generally attribute their success to stable, internal factors such as ability, and their failure to unstable, external factors such as luck. The findings for females are less clear, but apparently many females tend to attribute failure to stable, internal factors such as ability,

and success to unstable factors such as luck or effort. Many other females seem to manifest a general externality, and attribute both success and failure to external causes such as task ease, all of which imply a general pattern of derogation, and prevent females from taking responsibility for the success or failure of an outcome, but also obviate the pride or shame associated with same. Females' general patterns of attributions would seem to both result from, and serve to maintain, lower expectancies and lower confidence. Furthermore, these might even be expected to lead to a general avoidance of achievement situations since their potential outcome, given these attributions, is not very personally gratifying.

One other closely related point made by Frieze (Note 5) in her exhaustive, current review of the causes of success and failure as internal and external barriers to achievement in women should be mentioned here. This is to say, that achievement is also an important differentiating variable between groups of women as well as between the sexes. While the attributional patterns described earlier comport well with women in general, particularly more traditionally oriented women, the attributional pattern for women with high achievement motivation apparently differs. Professional women, for example, appear to be highly motivated to succeed and work very hard, and their continued pattern of achievement suggests that they may perceive their success and failure as contingent upon their continued effort rather than luck or other causal factors.

The last personality considerations relevant to the study sample as a whole, which exhibited some significant heterogeneity among the three primary groups was the Masculinity dimension. Perhaps predictably, the Males were found to exceed both groups of females on Masculinity, but significantly so in the case of the RTF group only, with the RIF group falling between these two groups on this dimension. Although it was originally anticipated that the RIF group would be less feminine, and more androgynous and masculine than the RTF group, and while this was not confirmed, the fact that the Masculinity scale scores of the RIFs were in between those of the Males and the RTF's, when taken along with their least sex-typed Androgyny scores, is suggestive of a rather androgynous sex-role orientation relative to the groups at hand. The relatively androgynous orientation of both the Male and RIF groups was further corroborated when their Androgyny t-ratios were utilized to determine their sex-type classification category based on representative normative categories. Bem (1975) makes the case that sex-role adaptability is one demonstrated consequence of psychological androgyny. By this it is meant that more androgynous individuals have been found to be more likely to engage in situationally effective behavior without undue regard for its stereotypical appropriateness for one or the other sex. This potential capability would seem to apply to all three of the primary groups to a somewhat greater or lesser extent, as none of the groups was markedly sex-typed overall. It is the RIF group, however, who by their very definition, as well their least overall sex-typed Androgyny

scores, might be considered most exemplary of this sex-role adaptability, at least at first glance.

Experimental Phenomenon of Self-Devaluation and Related Variables

Turning now from the mainly descriptive considerations of the demographic and personality data for the study sample as a whole to that of the experimental data, several things become apparent about the hypothesized phenomena related to "self-devaluation."

Performance expectancies. No significant differences were found among the three primary groups of the study sample as a whole on their initial experimental performance expectancy scores. In this regard, a subtle but seemingly important distinction should be made here. While the terms "expectancy" and "aspiration level" are frequently used interchangeably in the literature, there is a practical distinction between the two as Stein and Bailey (1973) remind us:

Expectancies measure what the individual believes she will be able to do, while level of aspiration measures what level of difficulty the individual chooses to attempt. The goals chosen probably reflect not only expectancy of success but level of risk the person is willing to tolerate. (p. 355)

The foregoing definition of expectancy rather than aspiration level is also more consistent with the intended meaning of "expectancy" as used in this study.

It will be recalled that the experimental paradigm in the study was such that the initial performance expectancy estimates were given by an individual after they had been told of the ostensible sex-related nature of the task, thereby pre-

sumably making the sex-role stereotypes salient. While the three primary groups were found to be apparently relatively homogeneous in their experimental performance expectancies, irrespective of any potential impact of the sex-related task, visual inspection of the mean values for the various treatment combinations both within a group and among the groups reveals some potentially suggestive trends. For example, when the mean experimental performance expectancy estimates of Table 1 for the RIF group are considered from left to right or in the order of Masculine, Feminine, and Neutral sex-related task conditions, it can be seen that their estimates diminish, while those for the RTF group increase. The mean estimates for the Males, however, are more variable in their rank-order pattern, but less variable in the overall range of possible values taken. The net result of the relative decrement in mean values for the RIF's, the relative increment in mean values for the RTF's and the relative pattern variability, although more constricted range of values for the Males, is that the Neutral sex-related task condition accounts for the RIF's lowest expectancy estimate, the RTF's highest expectancy estimate, and in the case of the Males, again, the highest relative expectancy estimate for them.

If it can be assumed that the task per se was fairly sex-neutral and ambiguous in its skill requirements, as well as reasonably novel, such that it could also be assumed that the participants had little or no experience with this particular task configuration, then the task could be viewed as tapping

rather generalized expectancies (Rotter, 1966; Frieze, Note 5) on the part of the participants. These generalized performance expectancies were then intentionally experimentally manipulated by means of the presumably moderating influences of the sex-related nature of the task. That this may have been effected, although certainly not to statistically significant degrees among the various treatment combinations is thought to be reflected in the visually suggestive trends mentioned. Although the males and females did not exhibit any significant differences in experimental performance expectancy estimates, contrary to the general theoretical findings mentioned earlier in regard to the typically lower expectancies for females than for males (O'Leary, 1974; Stein, & Bailey, 1973; Frieze, Note 5), any potential differences might have been attenuated by the relative homogeneity of the three primary groups found on the Achievement dimension which, it will be recalled, was also one of the three highest scale dimensions of the PRF personality scales for all three groups. Also, the effects of the earlier discussed significantly greater affiliation on the part of the males relative to the females, and the significantly greater aggression on the part of females relative to the males as specific instances of cross-sex adaptation, may have neutralized potential differences otherwise in initial experimental performance expectancies between the females and males. The possible facilitation of higher expectancies for females, and possible vitiation of more typical expectancies for males

may be natural corollaries to these instances of cross-sex adaptation.

When, however, the trends for each of the primary groups were visually noted, particularly those of the RIF and RTF groups, what seems to be suggested as potentially operative in modulating their respective patterns of experimental performance expectancies might best be explained as competition. The RIF group, by their operational definition, are females whose academic/vocational experience and goals are innovative or atypical for females, and whose academic/vocational milieu has been largely that predominated by males. Generalizing from such experiences, it may well be that competition has come to be maximally spurred by Male sex-related tasks, less so for Female sex-related tasks, and perhaps least so for fairly androgynous, ambiguous Neutral tasks. For the RTF group, on the other hand, who, also by operational definition are females whose academic/vocational experiences and goals are more traditional or typical for females, and whose academic/vocational milieu has been largely predominated by females, there may well have come to be inhibitions about sex-specific competition generally, and especially so with males. If little or no sex-specific competition is implied, as perhaps in the case of the ambiguous Neutral task condition, then there may be little or no inhibition operating. Invoking the same explanatory construct of competition in the case of the Male group would cast them as only slightly less competitive on Feminine than on Masculine sex-related tasks, but the most

competitive on the fairly androgynous, ambiguous Neutral task condition. And while it seems plausible that competition, itself, may be mediated by yet other variables, e.g., the fear of failure or fear of success motives (Hoffman, 1974; Karabenick & Marshall, 1974), Fisher (Note 6) suggests that differential competitiveness implicit or explicit in various studies may explain varying outcomes in sex differences in expectancies.

In any event, the relative homogeneity of the study sample in its experimental performance expectancies would seem to warrant concluding that, in the main, the sex-related nature of task conditions apparently were not very salient to the performance expectancies of the primary groups. Perhaps the practical significance of the relative homogeneity of the three primary groups comprising the study sample as a whole is that these same groups do not particularly subscribe to stereotyped gender-roles, which accords well with the previous androgynous findings for both Males and RIF's, and the somewhat less androgynous but more nearly feminine sex-role orientation of the RIF's.

Experimentally induced devaluation. Having now considered the initial experimental performance expectancy data in some detail, we can now consider the devaluation phenomenon experimentally induced by the administration of critical devaluative feedback (Tables 3-5 and Figure 3). The experimentally hypothesized greater self-devaluation of females than males was not confirmed. Apparently females, at least females with the psychological makeup constituting these groups, are

not more vulnerable to self-devaluation than males, or males whose psychological makeup is similar to this group of males. And, of course, it must be remembered that the males and females were relatively homogeneous on a number of variables, any number and configuration of which may have accounted for the lack of significant differences in self-devaluation.

Nor were the RTF's found to be significantly more prone than the RIF's to self-devaluation irrespective of the sex-related task condition, contrary to hypothesized predictions. What was found, rather, was that RTF's manifested significantly more self-devaluation than RIF's on Neutral sex-related tasks only. While this finding would not have been predicted, it may be partially explained by reference to the mean experimental performance expectancy values of Table 1 previously discussed. As can be seen, the initial performance expectancy values for the Neutral sex-related task condition represent a relatively low extreme value for the FIF's, and a relatively high extreme value for the RTF's. These values may also represent a relative "floor" and "ceiling" effect for RIF's and RTF's respectively, and may thereby account for the apparent relative resistance of the RIF's to diminish their future performance expectancies in the Neutral task condition, and may also account for the apparent increased likelihood of the RTF's in diminishing their future performance expectancies in the Neutral task condition. Closely related to this explanation is that proffered by Feather (1968) in his work on the effects of success or failure as predictors of subsequent

performance expectancies. That is to say that individuals who experience marked inconsistency between their initial expectancies and performance feedback (e.g., RTF's) are more likely to change their expectancy ratings than are individuals who do not experience marked inconsistency (e.g., RIF's). Another possible explanation for the fact that the RIF's manifested significantly less self-devaluation than the RTF's in the Neutral task condition may be related to the relative androgyny implied by this task condition. Once again, because of the relatively more androgynous sex-role orientation and experience with mixed-sex competitive tasks of the RIF's than the RTF's, the RIF's may be less subject to self-devaluation than the RTF's in this type of task situation when faced with critical feedback. Congruence and familiarity are likely the implicit issues being addressed here, which is to say that the more appropriate (or sex-appropriate) and congruent a task situation is felt to be, as well as the more familiar one is with similar situations, the more likely some reasonable baseline confidence level is established. This confidence level may well mitigate any potentially untoward effects of devaluation in similar circumstances. And, in its own way, the significantly greater self-devaluation of RTF's than RIF's in the Neutral task condition may be the purest test of any potentially differing tendencies to self-devaluation generally between the two groups, as it does not entail the moderating complexities of the sex-related nature of tasks in its implied absence of sex-role stereotypy.

Further examination of Figure 3 also reveals that the RTF's did not manifest greater self-devaluation on Masculine than Feminine sex-related tasks as originally hypothesized. In fact, the RTF's were not found to manifest significantly differing degrees of self-devaluation among any of the three types of sex-related tasks. This may connote the relative insignificance of the sex-related nature of the tasks generally (either a weak experimental effect and/or a lack of salience for this group in particular), it may reflect limited ego-involvement in the task (particularly since it is not a typically feminine task) such that the devaluative feedback had little potential impact on changing expectancies, or it may indicate the discounting of the fictitious sex-related task norms or feedback, vitiating the potential meaningfulness of the results (Feather, 1968).

Figure 3 also points up that the hypothesized lack of significant differences in self-devaluation among the types of sex-related tasks for RIF's was not confirmed. But, it was found instead that the RIF's manifested significantly less self-devaluation on the Neutral sex-related task than on either the Masculine or Feminine sex-related tasks. This outcome may, once again, be related to the relatively extreme, low value of the RIF's initial experimental performance expectancy and, therefore, more "resistance" to devaluation in the form of setting lower future performance expectancies in this task condition than in the Masculine or Feminine sex-related task conditions. Or, it could be that this outcome was the result of a convergence of factors enumerated earlier,

such as the relative androgyny of the Neutral task condition, the enhanced familiarity, congruence, and consequently, level of confidence, that the Neutral task condition may have held for the RIF's in setting their performance expectancies, both the initial experimental and future expectancies, relative to those for the Masculine or Feminine sex-related task conditions. As posited earlier, these may mitigate the potential negative effects of devaluation. Furthermore, once having set up these varying expectancies for each type of task condition, it has also been found that the more unexpected the outcome in the way of performance feedback (devaluative in this case), the more often such outcomes tend to be attributed to variable or unstable environmental factors (luck) than are the expected outcomes in general (Feather, 1969). This is thought to be done in the interest of cognitive balance, whereby outcomes congruent with one's self-evaluation are "owned" by the individual concerned, while those found to be incongruent with the self are disowned and, like much of the attributional research discussed earlier, arises from the work of Heider (1958). This may have permitted the RIF's to attribute the cause of their poor performance in the more familiar, congruent, and assured Neutral condition to some transient, unstable aberration which might not similarly effect, or effect to the same degree, their subsequent or future performance expectancies, with the net result of minimizing their self-devaluation in this task condition relative to the Masculine or Feminine sex-related task conditions. All of

which is to say that any number of inferences could be made about the possible cognitive attributional bases of a given individual's or group's devaluative behavior in the way of changes in performance expectancy from the initial experimental performance expectancies to the future performance expectancies. But since the particular attributional patterns of the differing groups unfortunately were not being assessed, these are at best simply inferences for the time being.

What it seems can be most meaningfully said in general is that only the female groups, the RIF's and the RTF's, and not the Males, differed significantly in self-devaluation. This may be related to the earlier finding that both groups of females are significantly more E oriented in their locus of control than the Males, thereby making them more susceptible to the potentially debilitating effects of devaluative feedback than are the Males. It could also be that the quite unexpected, atypical finding of a significantly greater need for aggression on the part of the study females than the study males, as well as the significantly greater need for affiliation found on the part of the study males than the females may be related to differing motives and goals in setting and changing one's performance expectancies, resulting in differing patterns of self-devaluation. Insofar as significant differences in self-devaluation both among the groups of females, the RTF's and RIF's, as well as within the RIF group among the various sex-related task conditions, it would seem that both personality and situational determinants such as the relative

sex-role stereotypic salience of sex-related tasks, one's own sex-role orientation, baseline confidence levels derived from felt congruence and familiarity with similar types of tasks, patterns of causal attributions, "ceiling" and "floor" effects in expectancy estimates, task demand characteristics (ambiguity, credibility, ego-involvement) and perhaps other more remote considerations not conceived of or assessed here might all be explanatory to varying degrees.

Personality variables potentially related to self-devaluation. An analysis of the variables hypothesized to be experimentally-related to the phenomenon of self-devaluation give rise to some additional considerations. For example, when the effects of femininity per se in females were examined in conjunction with self-devaluation by correlating psychological Femininity of the BSRI with self-devaluation, the significant positive relationship hypothesized was not found and in fact, they were found to be very minimally negatively correlated. Apparently femininity, in and of itself, is not particularly relevant to devaluation, contrary to the predictions arising from sex-role theory. Or, at least the "socially desirable" aspects of femininity, which is what the BSRI Femininity scale assesses rather than the more "neurotic" and devalued aspects of femininity, are apparently not significantly positively related to self-devaluation tendencies. It may be, however, that the significant positive correlation presumed between femininity and self-devaluation may obtain only for females who manifest significantly more femininity than

those of the study sample, i.e., the more extreme tail of the femininity continuum. This would seem to be an especially relevant consideration when it is realized that the overall sex-role orientation of the two primary female groups in the study, the RIF's and RTF's, were determined to be relatively androgynous in the case of the RIF's and somewhat indeterminate or near feminine in the case of the RTS's, relative to the normative sample. Also, perhaps the notion of femininity is really a rather ambiguous surrogate variable for some other more meaningful and conceptually refined variables such as self-esteem, which may be significantly related to self-devaluation tendencies.

Nor were the High Femininity females found to manifest significantly greater self-devaluation on more Masculine than on more Feminine sex-related tasks, contrary to hypothesized predictions. Once again, perhaps "femininity" loosely conceived is not the critical variable hypothesized to account for potential differences in self-devaluation, or perhaps the relative levels of femininity found for the female groups in the study were not sufficiently high or within the range of those required to affect self-devaluation. Perhaps the most likely, parsimonious explanation, however, is the lack of sex-role stereotypic salience of sex-related tasks for females whose feminine sex-role orientation approaches that of the High Femininity females of the study sample, such that it does not really affect the presumed relationship between femininity and devaluation. Similar rationales might also be invoked to

account for the fact that, as hypothesized, the Low Femininity females this time did not significantly differ in self-devaluation as a function of the type of sex-related task. Or, in keeping with the experimental rationale derived from theoretical predictions, it may really be that for females relatively low in psychological femininity, or at least for values as low as those of the Low Femininity female sample, the sex-role stereotypic salience of sex-related tasks is not particularly meaningful to them, consistent with their own non-stereotypically feminine sex-role orientation.

When, however, this knotty problem of the personality factors associated with self-devaluation in females was approached from the slightly different tack of comparing High and Low Self-Devaluation females on a number of PRF personality characteristics speculatively inferred to be germane to the devaluation phenomenon, only the directional alternative hypothesized for the personality dimensions of Dominance, i.e., females relatively low in self-devaluation manifest significantly more dominance than females relatively high in self-devaluation, was found to be significant. Apparently females who are more dominant are less subject to self-devaluation in the face of critical feedback, perhaps because dominance is part of the ego resilience (or constellation of personality factors) theoretically posited to account for the devaluation phenomenon. This takes on added meaning when it is realized that it is male dominance, in fact, which is part of the institutionalized, diffuse status characteristic of sex-role (D'Andrade, 1966) that was theoretically postulated to account

for the ego-resilience of males relative to females in the face of devaluation.

Another presumably related aspect of the devaluation phenomenon pertained to locus of control. The hypothesized significantly greater E orientation of the High Femininity females than of the Low Femininity females, with the latter group more closely resembling the Males, was not confirmed. Instead, the Low Femininity females were found to significantly exceed the Males, with the E locus value for the High Femininity females interposed between these (Table 10). Apparently psychological femininity is not so simply related to E locus of control as implied in the manner hypothesized, or at least this presumed relationship fails to obtain within a relatively truncated distribution of scores as the High and Low Femininity female groups of the study may represent. These groups, of course, comprise a subsample of the primary groups of females whose own overall range of sex-role typing (mean Androgyny scale scores) was relatively androgynous. Account must also be taken of the fact that in an attempt to "match" somewhat the Males with the primary female groups by limiting their selection to the role-innovative and role-traditional fields, they too represent a relatively restricted sample, and an androgynous one at that. Moreover, numerous comparisons on descriptive measures failed to find statistically significant differences between these groups of males. It can only be speculated that comparison of the female groups of interest,

both the primary groups and the High Femininity and Low Femininity groups, with a random and less homogeneous sample of college males might have resulted in outcomes more consistent with predictions. Why, nevertheless, any significant differences that might exist in E locus would lie between the Low Femininity females and the Males is not presently clear, and must remain an anomalous finding for the present. An additionally interesting, although somewhat incidentally related, observation was that the group composition of the High and Low Femininity females was not found to significantly differ in the proportions of RIF's and RTF's contained within each of the groups. Apparently, then, high femininity and role-traditionality do not necessarily go hand in hand, nor does low femininity and role-innovativeness, as implicitly presumed.

In sum, the purported relationship of femininity to self-devaluation and to E locus of control, as well as the relationship of femininity and self-devaluation to the variable of the sex-role stereotypic salience of sex-related tasks was significantly over-simplified, in light of the findings. The complexity likely arises from the ambiguous construct validity of some of the variables themselves, but also probably signifies that the relationship and interactions, if any, of the variables under consideration are considerably more complex than previously conceived. Additionally, the representativeness of the various study sample groups in the range of possible

values taken for the personality dimensions of interest is seriously open to question. Further research with more representative sampling of individuals with the appropriate personality characteristics, rather than secondary or tertiary surrogate variables, and individuals who manifest a given dimension of interest to a degree that would permit examining potentially important levels or ranges of values that might even take on different qualitative meanings in addition to simply quantitative differences, seems in order. Only then will the nomological network within which any of these variables operate and from which they take on their operational definition and theoretic significance be charted and appreciated.

Personality/Biographical Comparisons of Role-Innovative and Role-Traditional Females

Focusing now on the final data of the study, the remaining personality and biographical data for the two primary groups of interest to the study, the RIF's and RTF's, afforded numerous comparisons. Very few or essentially no statistically significant differences, however, were revealed between these two groups of females, as reference to the PRF data of Table 11, and the biographical inventory data of Appendix H indicate. Although many of these comparisons were simply exploratory in nature, others were motivated and given meaning by the earlier highlighted work of Tangri (1972) and Gump (1972), as well as those drawn from a review of relevant literature (Fowler, Note 1).

Personality factors. Included in the earlier discussed considerations pertaining to the study sample as a whole, it

will also be recalled that no significant differences were found between the RIF's and RTF's on the Masculine, Feminine, or Androgyny sex-role components of the BSRI, and none were found on the I-E scale. This last finding pertaining to the I-E locus of control dimension was rather surprising, although no formal predictions had been made in regard to comparisons among these two groups of females on this dimension. The unexpectedness of the present finding, nevertheless, arises from Tangri's earlier (1972) finding that role-innovative females appear to be more individualistic, autonomous, and motivated by internally imposed demands than do role-traditional females, which seemed to suggest that there might be a relationship between role-innovative occupational aspirations and locus of control. Similarly, Burlin (Note 7) also found a significant relationship between the locus of control dimension and occupational aspiration among adolescent females, whereby those who were more I locus were more likely to aspire to an innovative occupation than those who were more E locus. As Burlin (Note 7) points out, however, the research to date concerned with the relationship of locus of control to female achievement or aspiration is not definitive, and as Frieze (Note 5) pointed out earlier, varies even among differing groups of females.

Self-rated attractiveness, although an intriguing exploratory dimension that might have been expected to potentially differentiate between these two groups, also failed to reveal significant differences, consistent with similar find-

ings of Kanekar and Ahluwalia (1975) when external ratings for differences in physical attractiveness for males and females were examined in relation to academic aspirations. Horner (1972), however, found that the college females in her study ascribed physical unattractiveness to high achieving women in hypothetical situations with varying achievement themes. This probably derives, in part, from the common myth alluded to earlier by Tangri (1972), that role-innovative (frequently synonymous with high-achieving) females have come by their unusual occupational aspirations by default, since as people, they are presumed to be lacking in qualities, attractiveness among them, that would facilitate the typical "feminizing" functions and roles of wife and mother. It would seem that this particular myth found no support in the present study.

Biographical factors. In reflecting upon the numerous biographical data for these two groups, it was evident that there were no significant differences to speak of except perhaps descriptively, with the possible exception of the rather unexpected finding that of those females who presently planned to have children, the RIF's planned on having somewhat slightly more children on the average than the RTF's. Current research in this area (Eagly and Anderson, 1974; Lott, 1973; Vogel, Rosenkrantz, Broverman, Broverman, & Clarkson, 1975) bearing on sex-role in relation to life-style preferences and family plans, has found that those females whose self-concept and sex-role were non-stereotypic also tended to desire smaller families than those females who maintained more stereotypic

self-concepts and sex-roles. It must also be pointed out that the mean values for the RIF's and RTF's on this point may not be entirely representative, since they do not include a number of females of both groups who, while they indicated their present family plans for the future were to remain childless, nevertheless, also indicated some optimum number of children that might eventuate for them depending on variable circumstances at some later time. These figures are, therefore, more ambiguous than they may seem, if one allows for the possibility of changing one's mind, a traditionally "feminine prerogative."

Other general, descriptive impressions provided by the biographical data include indications that both parents play essentially equally important but perhaps slightly different roles for these two groups of females in their socialization and identification experiences. That's to say that both groups of females came from families that were perceived by them as either relatively egalitarian, where, for the most part, both parents were equally dominant in the family, or somewhat matriarchal, where Mother was seen as the next single most dominant member. Mother and Father were cited equally often as the parent most identified with or alike, although somewhat more of the RIF's indicated identifying with both parents equally. Taken together, these developmental influences may account in part, vis a vis role-modeling and other identification processes, for the relatively androgynous sex-role orientation of the RIF group, and the somewhat less androgynous, or near feminine orientation of the RTF group.

While both groups indicated that Mother is the parent they are closer to presently, the RIF's indicated Mother as the parent they had also typically gotten along with better, and the RTF's indicated Father as the parent they had typically gotten along with better. These results may also be related to the finding that while most RTF's and RIF's felt understood by their mothers, and most RTF's felt understood by their fathers as well, about half of the RIF's felt understood by their fathers, while the other half did not. Most of these findings may have a common basis, in part, if the role-innovativeness of the RIF's created dissonance, and acted as an obstacle in their relationship with their fathers, particularly if their fathers held stereotypic views of femininity and sex-role appropriate behavior, including occupational choice, or if they were believed by their daughters to have held such views (Steinmann, 1958; Steinmann and Fox, 1966).

The net result in either case may have led to some number of the RIF's not feeling understood by their fathers, perhaps typically getting along better with their mothers, and eventuating in their presently feeling closer to their mothers. The presumably more traditional role of the RTF's, in turn, may have permitted them, relative to the RIF's, greater understanding with their fathers, although perhaps placing them in some competition with their mothers. This may have resulted in their feeling of having typically gotten along better with their father than their mother, although not accounting for the finding of their presently feeling closer to their mother--

unless this is perhaps based on their shared common experience of womanhood. This is at best highly speculative, however, since it represents an amalgam of cross-sectional and retrospectively longitudinal data, making it impossible to know in the final analysis what may have given rise to what in this instance.

Apparently, although the majority of presently working mothers were in feminine stereotypic fields, this did not preclude their daughters from striking out on their own in opting for other, more atypical fields. The data seem to suggest that occupational patterns of the mothers of both those in the RIF and RTF groups did not seem to overdetermine their daughters' occupational choices or career/lifestyle plans, as evidenced in the diversity among mothers and daughters on such issues. While the particular form that Mothers' employment took did not seem critical to their daughters' choices, the very fact that so many of the mothers did work likely diminished any stereotypic conceptions of male and female roles that their daughters may have had (Vogel, Broverman, Broverman, Clarkson & Rosenkrantz, 1970). It also clearly seems that reasons of personal satisfaction were the most common basis for occupational choice from among the available alternatives for both groups, who were also equally positively committed to their occupational fields of choice.

The lifestyle of both groups, for the most part, also figures around desiring marriage, children, and working full-

time. If married, with a family, the continuity of their respective work patterns points up with about equal likelihood the intention of the RIF's to work continuously or discontinuously. The RTF's, however, seem more predisposed to working discontinuously (taking time out for homemaking and child-rearing). Additionally, the majority of both the RIF and RTF groups express no potential conflict over their dual roles, although empirical findings in this area concerning the feasibility of optimizing satisfactions associated with dual marital/career roles are presently somewhat inconsistent (Bailyn, 1971; Gannon & Hendrickson, 1973; Orden & Bradburn, 1969; Rapoport & Rapoport, 1969; Hall & Gordon, Note 8), and optimization apparently entails knowledge of the combination of roles available to, and preferred by, the husband as well as the wife in the family matrix.

It is possible that no significant differences were revealed between these two groups of females in the rather extensive biographical data reviewed because perhaps the biographical measures might be considered too crude to permit meaningful discriminations to be made. These same data, however, when considered along with much of the previously cited personality data, would seem to indicate that these two particular groups of females may well not be from statistically different populations as originally anticipated, although they apparently do differ to some extent in the relative degree to which they manifest the dimensions assessed, with some trends in the appropriate directions based on relevant

theory. This, of course, is not to rule out numerous other dimensions which were not assessed.

One further consideration which may also help put the lack of differences between the RIF and RTF groups into perspective, is that the females of Tangri's (1972) and Gump's (1972) studies represented those attending major universities in the mid to late 60's. As mentioned much earlier, this was a period of much questioning of traditional values, and gender-roles weren't exempt from this review. This was an historical point of departure, a time when it was atypical and innovative for females to make such occupational choices as medicine, engineering, etc. While females have only begun to make inroads into some of these previously male dominated fields, apparently the influences of acculturation for today's females are enlighteningly different from times past, but perhaps no longer significantly different between those groups of females who choose either role-innovative or more role-traditional occupational fields. This is to say that perhaps there are no particularly discriminating antecedents to occupational choice of a nomothetic nature, or at least not from among those several assessed for the purposes of this study. Instead, perhaps the best predictor and/or rationale for any given occupational choice presently is--occupational choice. This is said with tongue in cheek only in part, since while this seemingly over-simplified, sweeping generalization may appear to further obscure real, potential explanatory differences, it is meant rather to convey the full complexity and

heterogeneity of the individuation entailed in occupational choice, and reflected in the motive most frequently endorsed by both the Role-Traditional and Role-Innovative females of this study as the basis for their choices, viz., "personal satisfaction." In conclusion, and consistent with the thinking of Rapoport and Rapoport (1971) in light of their own research in the same area, it can be said:

Materials presented in this paper have shown. . . early influences and later influences interact in rather more complex ways than is generally recognized, and that it is useful to consider a process of "metamorphosis" as well as one of "re-enforcement" in understanding how they interact. While the arithmetic model of re-enforcement and counter-action does operate, there are also interactions which are more complex--releasing hidden potentials, reversing the expected course of action of a variable, and so on.

Taking all this into account, it would seem that a sophisticated analysis of the ways in which early and late socialization experiences combine to influence adult behaviour depends on a dynamic theory--one that articulates psychological and sociological concepts better than any now in existence. (p.27)

APPENDICES

APPENDIX

- A Research Announcement
- B Experimental Performance Expectancy Scale
- C Future Performance Expectancy Scale
- D Instructions Enclosed with Pre-Experimental Materials Mailed
- E Biographical Inventory
- F Description of the PRF Scales
(Jackson, 1974)
- G Bem Sex-Role Inventory Scale Items
- H Biographical Inventory (n = 60)

APPENDIX A

Research Announcement

2 hrs. experimental credit
available to appropriate students
enrolled in undergraduate psychology
courses requiring it. SIGN UP EARLY &
PHONE.

Summer & Fall, 1975
Experiment #685

Experimenter: M. G. Fowler
PHONE: 375-0391
(between 8-12 AM & Eves., M-Th)

JUNIORS
SENIORS
GRADUATE STUDENTS
PROFESSIONAL STUDENTS

Doctoral PERSONALITY research is being conducted in the area of occupational choice and roles. Participants will be provided feedback concerning several interesting aspects of their personalities. Males and females either presently majoring in or taking appropriate coursework toward one of the following vocational fields are invited to participate. If, for example, you are presently enrolled in medicine or engineering here at UF, you are "majoring in" medicine or engineering respectively. If, however, UF does not have a specific major offered in your intended vocational field, for example, social work or library science, but you are taking "appropriate coursework toward that intended vocational field, " you qualify to participate.

The fields of interest are:

ARCHITECTURE	EDUCATION (Elementary, Early Childhood)
ECONOMICS	
BUSINESS (all majors)	NURSING
PHARMACY	SOCIAL WORK
LAW	LIBRARY SCIENCE
DENTISTRY	HOME ECONOMICS
ENGINEERING	SECRETARIAL
PHYSICAL & BIOLOGICAL SCIENCES	FOOD SCIENCES
AGRICULTURE (all majors)	INTERIOR DESIGN
ANIMAL SCIENCE	
VETERINARY SCIENCE & MEDICINE	
FORESTRY	
MATHEMATICS	

The research would involve a completion of some "normal" personality instruments and participation in a brief experiment,

and would likely require 2-3 hours over a 2 week period. All data will be treated as confidential. If you wish to participate, PLEASE PHONE THE ABOVE NUMBER and also sign up on the attached sheet, indicating your phone number and when you can be reached.

APPENDIX B

Experimental Performance Expectancy Scale

RI NRI

M F N

E Score

P-E Score

Score

Name

SS#

M F

Sex (Encircle)

Present College/Vocational
Major

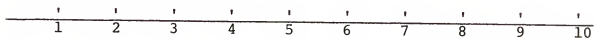
Please rate your anticipated performance on the task for which
you just completed practice trials.

1 2 3 4 5 6 7 8 9 10

APPENDIX C

Future Performance Expectancy Scale

Please rate your anticipated future performance on the task which you just completed.



APPENDIX D

Instructions Enclosed with Pre-Experimental
Materials Mailed

Personality/Occupational Research Study

Dear Study Participant:

Enclosed are some forms to be completed by you. Please note the directions carefully, complete each form at one uninterrupted sitting, and complete all forms within a week.

Then, if you would, please call me immediately at 375-0391, 8-12 AM or evenings, and we will arrange a convenient time for you to take part in a brief experiment at the Psychology building. If you complete these forms sooner than a week, don't hesitate to call me then.

PLEASE REMEMBER TO BRING THIS ENVELOPE WITH THE COMPLETED FORMS IN IT TO YOUR SCHEDULED APPOINTMENT.

Thank you,

M. G. Fowler

APPENDIX E

BIOGRAPHICAL INVENTORY

RI NRI

DIRECTIONS:

Please answer each item completely and do not skip any item, as it is most important that we have complete data on all study participants. In answering items, just put a check mark ☒ above the response that is appropriate to you. Thank you.

Name _____

M _____ F _____

Sex (encircle) _____ Age _____

Present College Major/Vocational Field _____

Junior Senior Grad.Student _____

Professional Student _____

Student Status (encircle) _____

- How many children are there in the family from which you come?
- What "number" (birth order) child were you in your family?
 - a) _____ Only child
 - b) _____ First born
 - c) _____ Number
 - d) _____ Last born
- Do you come from an "intact" family (your natural parents are not divorced or widowed)?
 - a) _____ yes
 - b) _____ no
- Would you describe your family as basically harmonious while you were growing up?
 - a) _____ yes
 - b) _____ no
- What is your father's educational level in years of school completed? (encircle)
 1 2 3 4 5 6 7 8 9 10 11 12/13 14 15 16/ 17 18 19 20/ > 20
- What is the highest degree your father holds, if applicable?
 - a) _____ A.A.
 - b) _____ B.A./B.S.
 - c) _____ M.A./M.S.
 - d) _____ Ph.D. or Professional Degree

7. What is your mother's educational level in years of school completed? (encircle)
- 1 2 3 4 5 6 7 8 9 10 11 12/13 14 15 16/17 18 19 20/ >20
8. What is the highest degree your mother holds, if applicable?
- a) b) c) d)
A.A. B.A./B.S. M.A./M.S. Ph.D. or Professional Degree
9. What did your father do for a living most of while you were growing up?
- a) Unemployed b) Unskilled Laborer c) Blue Collar Worker d) White Collar Worker
- e) Professional
10. What did your mother do most of while you were growing up?
- a) Housewife b) Employed c) Intermittently Employed
11. If your mother was ever employed outside your family home, which of the following describes her type of employment?
- a) Unskilled (e.g., domestic) b) Blue Collar (e.g., factory) c) White Collar (e.g., office) d) Professional (e.g., teacher)
- e) Not applicable (see #10)
12. How long was your mother employed outside your family home all tolled, in years or months?
- a) years b) months c) not applicable (see #10)
13. Did your mother seem to enjoy her work outside the family home most of the time?
- a) yes b) no c) not applicable (see #10)

14. For which of the following reasons, primarily, do you think your mother sought employment outside the family home?

a) Self-fulfillment b) Economic necessity c) Undefined d) Not applicable (see #10)

15. Is your mother presently employed?

a) yes b) no

16. If your mother is employed, is she in one of the following fields: Library Science; Nursing; Secretarial or Office Work; Social Work; or Elementary Teaching?

a) yes b) no c) not applicable (see #15)

17. Did (does) your father seem to approve of your mother's employment?

a) yes b) no c) not applicable (see #10 and #15)

18. Could you estimate your family's present income level in thousands of dollars annually?

Amount

19. Which of your parents was typically most dominant in the family constellation:

a) Father b) Mother c) Both equally

20. Which of your parents do you most identify with, i.e., which one are you most like (in your opinion)?

a) Father b) Mother c) Neither d) Both Equally

21. Which of your parents have you typically gotten along with better?

a) Mother b) Father c) Both Equally

22. Which of your parents are you "closer" to presently?
a) Father b) Mother c) Neither d) Both Equally
23. Does your father approve of and encourage you in your occupational choice?
a) yes b) no
24. Does your mother approve of and encourage you in your occupational choice?
a) yes b) no
25. Do you feel that your mother understands you?
a) yes b) no
26. Do you feel that your father understands you?
a) yes b) no
27. Did one of your parents suggest your occupational choice to you?
a) Mother b) Father c) Both d) Neither
28. The basis for your choice of occupation was primarily (honestly)?
a) Altruistic b) Security (economic) c) Personal
Oriented Satisfaction
29. In growing up, which of the following were you most concerned with?
a) Mastery b) Having Friends and Being Liked
30. Have you frequently been concerned about "identity" or who you really are?
a) yes b) no

31. If you were to rate your presumed level of commitment to your chosen occupational field, insofar as your planned scheme of life, what would it be on the following scale? (encircle)

1	2	3	4	5
very	little		great	deal

32. What are your present personal lifestyle plans for the future?

a) Marriage b) Cohabitation c) Single

33. What are your present family plans for the future if applicable?

a) Have Children
(includes adoption) b) Childless c) Not applicable
(see #32)

34. If you plan to have (or adopt) children, how many would you like?

Number

35. How much do you typically plan to work in the future?

a) Full-time b) Part-time c) Little or none

36. If you marry and have a family, do you plan to work over the course of your married life?

a) Continuously b) Discontinuously (Taking time out for child-rearing or homemaking)

37. Do you feel that there is a potential conflict between fulfilling yourself as a wife and mother, and fulfilling yourself as an individual?

a) yes b) no c) not applicable (males)

38. If you had to point to some one person or group of people who have been most influential to you in helping to inspire either your choice of occupation or your persevering in that choice, who would that be?

a) College Faculty b) Parent(s) c) Peers d) Beau/Spouse

APPENDIX F

Description of the PRF Scales (Jackson, 1974)

Scale

- Achievement** Description of High Scorer: aspires to accomplish difficult tasks; maintains high standards and is willing to work toward distant goals; responds positively to competition; willing to put forth effort to attain excellence.
- Defining Trait Adjectives: striving, accomplishing, capable purposeful, attaining, industrious, achieving, aspiring, enterprising, self-improving, productive, driving, ambitious, resourceful, competitive.
- Affiliation** Description of High Scorer: enjoys being with friends and people in general; accepts people readily; makes efforts to win friendships and maintain associations with people.
- Defining Trait Adjectives: neighborly, loyal, warm, amicable good-natured, friendly, companionable, genial, affable, cooperative, gregarious, hospitable, sociable, affiliative, good-willed.
- Aggression** Description of High Scorer: enjoys combat and argument; easily annoyed; sometimes willing to hurt people to get his way; may seek to "get even" with people whom he perceives as having harmed him.
- Defining Trait Adjectives: aggressive, quarrelsome, irritable, argumentative, threatening, attacking, antagonistic, pushy, hot-tempered, easily-angered, hostile, revengeful, belligerent, blunt, retaliative.
- Autonomy** Description of High Scorer: tries to break away from restraints, confinement, or restrictions of any kind; enjoys being unattached, free, not tied to people, places, or obligations; may be rebellious when faced with restraints.
- Defining trait adjectives: unmanageable, free, self-reliant, independent, autonomous, rebellious, unconstrained, individualistic, ungovernable,

- Autonomy (Cont.) self-determined, non-conforming, uncompliant, undominated, resistant, lone-wolf.
- Dominance Description of High Scorer: attempts to control his environment, and to influence or direct other people; expresses opinions forcefully; enjoys the role of leader and may assume it spontaneously.
- Defining Trait Adjectives: governing, controlling, commanding, domineering, influential, persuasive, forceful, ascendant, leading, directing, dominant, assertive, authoritative, powerful, supervising.
- Endurance Description of High Scorer: Willing to work long hours; doesn't give up quickly on a problem; persevering, even in the face of great difficulty; patient and unrelenting in his work habits.
- Defining Trait Adjectives: persistent, determined, steadfast, enduring, unfaltering, persevering, unrelenting, relentless, tireless, dogged, energetic, has stamina, sturdy, zealous, durable.
- Exhibition Description of High Scorer: wants to be the center of attention; enjoys having an audience; engages in behavior which wins the notice of others; may enjoy being dramatic or witty.
- Defining Trait Adjectives: colorful, entertaining, unusual, spellbinding, exhibitionistic, conspicuous, noticeable, expressive, ostentatious, immodest, demonstrative, flashy, dramatic, pretentious, showy.
- Harmavoidance Description of High Scorer: does not enjoy exciting activities, especially if danger is involved; avoids risk of bodily harm; seeks to maximize personal safety.
- Defining Trait Adjectives: fearful, withdraws from danger, self-protecting, pain-avoidant, careful, cautious, seeks safety, timorous, apprehensive, precautionary, unadventurous, avoids risks, attentive to danger, stays out of harm's way, vigilant.
- Impulsivity Description of High Scorer: tends to act on the "spur of the moment" and without deliberation; gives vent readily to feelings and wishes; speaks freely; may be volatile in emotional expression.

- Impulsivity (Cont.) Defining Trait Adjectives: hasty, rash, uninhibited, spontaneous, reckless, irrepressible, quick-thinking, mercurial, impatient, incautious, hurried, impulsive, foolhardy, excitable, impetuous.
- Nurturance Description of High Scorer: gives sympathy and comfort; assists others whenever possible, interested in caring for children, the disabled, or the infirm; offers a "helping hand" to those in need; readily performs favors for others.
- Defining Trait Adjectives: sympathetic, paternal, helpful, benevolent, encouraging, caring, protective, comforting, maternal, supporting, aiding, ministering, consoling, charitable, assisting.
- Order Description of High Scorer: concerned with keeping personal effects and surroundings neat and organized; dislikes clutter, confusion, lack of organization; interested in developing methods for keeping materials methodically organized.
- Defining Trait Adjectives: neat, organized, tidy, systematic, well-ordered, disciplined, prompt, consistent, orderly, clean, methodical, scheduled, planful, unvarying, deliberate.
- Play Description of High Scorer: does many things "just for fun;" spends a good deal of time participating in games, sports, social activities, and other amusements; enjoys jokes and funny stories; maintains a light-hearted, easy-going attitude toward life.
- Defining Trait Adjectives: playful, jovial, jolly, pleasure-seeking, merry, laughter-loving, joking, frivolous, prankish, sportive, mirthful, fun-loving, gleeful, care-free, blithe.
- Social Recognition Description of High Scorer: desires to be held in high esteem by acquaintances; concerned about reputation and what other people think of him; works for the approval and recognition of others.
- Defining Trait Adjectives: approval seeking, proper, well-behaved, seeks recognition, courteous, makes good impression, seeks respectability, accommodating, socially proper, seeks admiration, obliging, agreeable, socially sensitive, desirous of credit, behaves appropriately.

Scale

Understanding	<p>Description of High Scorer: wants to understand many areas of knowledge; values synthesis of ideas, verifiable generalization, logical thought, particularly when directed at satisfying intellectual curiosity.</p> <p>Defining Trait Adjectives: inquiring, curious, analytical, exploring, intellectual, reflective, incisive, investigative, probing, logical, scrutinizing, theoretical, astute, rational, inquisitive.</p>
Infrequency	<p>Description of High Scorer: Responds in implausible or pseudo-random manner, possibly due to carelessness, poor comprehension, passive non-compliance, confusion, or gross deviation.</p>

APPENDIX G

Bem SEX-Role Inventory Scale Items

<u>Masculine Items</u>	<u>Feminine Items</u>	<u>Neutral Items</u>
49. Acts as a leader	11. affectionate	51. Adaptable
46. Aggressive	5. Cheerful	36. Conceited
58. Ambitious	50. Childlike	9. Conscientious
22. Analytical	32. Compassionate	60. Conventional
13. Assertive	53. Does not use harsh language	45. Friendly
10. Athletic	35. Eager to soothe hurt feelings	15. Happy
55. Competitive	20. Feminine	3. Helpful
4. Defends own beliefs	14. Flatterable	48. Inefficient
37. Dominant	59. Gentle	24. Jealous
19. Forceful	47. Gullible	39. Likable
25. Has leadership abilities	56. Loves children	6. Moody
7. Independent	17. Loyal	21. Reliable
52. Individualistic	26. Sensitive to the needs of others	30. Secretive
31. Makes decisions easily	8. Shy	33. Sincere
40. Masculine	38. Soft spoken	42. Solemn
1. Self-reliant	23. Sympathetic	57. Tactful
34. Self-sufficient	44. Tender	12. Theatrical
16. Strong personality	29. Understanding	27. Truthful
43. Willing to take a stand	41. Warm	18. Unpredictable
28. Willing to take risks	2. Yielding	54. Unsystematic

APPENDIX H

Biographical Inventory ($n = 60$)

Note: Item response ratios represent RIF/RTF groups respectively.

- How many children are there in the family from which you come?

$\frac{3}{3}$
Mean Number

- What "number" (birth order) child were you in your family?

a) $\frac{3}{2}$ Only Child b) $\frac{12}{9}$ First Born c) $\frac{9}{14}$ Ordinal Number d) $\frac{6}{5}$ Last Born

- Do you come from an "intact" family (your natural parents are not divorced or widowed)?

a) $\frac{24}{22}$ yes b) $\frac{6}{8}$ no

- Would you describe your family as basically harmonious while you were growing up?

a) $\frac{22}{23}$ yes b) $\frac{8}{7}$ no

- What is your father's educational level in years of school completed?

a) $\frac{2}{3}$ 1-8 b) $\frac{9}{6}$ 9-12 c) $\frac{7}{12}$ 13-16 d) $\frac{8}{8}$ 17-20 e) $\frac{4}{1}$ > 20

- What is the highest degree your father holds, if applicable?

a) $\frac{1}{1}$ A.A. b) $\frac{7}{8}$ B.A./B.S. d) $\frac{2}{4}$ M.A./M.S. d) $\frac{8}{5}$ Ph.D. or Professional Degree

- What is your mother's educational level in years of school completed?

a) $\frac{0}{2}$ 1-8 b) $\frac{7}{7}$ 9-12 c) $\frac{16}{18}$ 13-16 d) $\frac{5}{3}$ 17-20 e) $\frac{210}{}$ > 20

8. What is the highest degree your mother holds, if applicable?
- a) $\frac{2/9}{A.A.}$ b) $\frac{10/8}{B.A./B.S.}$ c) $\frac{3/2}{M.A./M.S.}$ d) $\frac{2/10}{Ph.D. or Professional Degree}$
9. What did your father do for a living most of while you were growing up?
- a) $\frac{0/0}{Unemployed}$ b) $\frac{0/0}{Unskilled Laborer}$ c) $\frac{7/4}{Blue Collar Worker}$ d) $\frac{8/15}{White Collar Worker}$
- e) $\frac{15/11}{Professional}$
10. What did your mother do most of while you were growing up?
- a) $\frac{18/13}{Housewife}$ b) $\frac{6/9}{Employed}$ c) $\frac{6/8}{Intermittently Employed}$
11. If your mother was ever employed outside your family home, which of the following described her type of employment?
- a) $\frac{1/0}{Unskilled Labor (e.g., domestic)}$ b) $\frac{3/1}{Blue Collar (e.g., factory)}$ c) $\frac{2/9}{White Collar (e.g., office)}$
- d) $\frac{13/12}{Professional (e.g., teacher)}$ e) $\frac{11/8}{Not applicable (see \#10)}$
12. How long was your mother employed outside your family home all tolled, in years or months?
- a) $\frac{12.42/11.11}{mean years}$ b) $\frac{11/8}{not applicable (see \#10)}$
13. Did your mother seem to enjoy her work outside the family home most of the time?
- a) $\frac{18/21}{yes}$ b) $\frac{1/1}{no}$ c) $\frac{11/8}{not applicable (see \#10)}$
14. For which of the following reasons, primarily, do you think your mother sought employment outside the family home?
- a) $\frac{8/11}{Self-Fulfillment}$ b) $\frac{10/9}{Economic Necessity}$ c) $\frac{1/2}{Undefined}$ d) $\frac{11/8}{not applicable (see \#10)}$

15. Is your mother presently employed?
- a) $\frac{14}{14}$ yes b) $\frac{15}{16}$ no c) $\frac{1}{0}$ not applicable
16. If your mother is employed, is she in one of the following fields: Library Science; Nursing; Secretarial or Office Work; Social Work; or Elementary Teaching (Role - Traditional fields)?
- a) $\frac{10}{10}$ yes b) $\frac{5}{4}$ no c) $\frac{15}{16}$ not applicable (see #15)
17. Did (does) your father seem to approve of your mother's employment?
- a) $\frac{16}{19}$ yes b) $\frac{1}{2}$ no c) $\frac{13}{9}$ not applicable (see #10 and #15)
18. Could you estimate your family's present income level in thousands of dollars annually?
- | $\frac{\$29}{23}$ | $\frac{7}{6}$ |
|-----------------------------------|-----------------------|
| Mean Amount (of those responding) | Number Not Responding |
19. Which of your parents was typically most dominant in the family constellation?
- a) $\frac{6}{6}$ Father b) $\frac{9}{12}$ Mother c) $\frac{15}{12}$ Both Equally
20. Which of your parents do you most identify with, i.e., which one are you most like (in your opinion)?
- a) $\frac{10}{8}$ Father b) $\frac{9}{13}$ Mother c) $\frac{1}{4}$ Neither d) $\frac{10}{5}$ Both Equally
21. Which of your parents have you typically gotten along with better?
- a) $\frac{14}{8}$ Mother b) $\frac{4}{11}$ Father c) $\frac{12}{11}$ Both Equally
22. Which of your parents are you "closer" to presently?
- a) $\frac{17}{17}$ Mother b) $\frac{3}{3}$ Father c) $\frac{10}{7}$ Both Equally d) $\frac{0}{3}$ Neither
23. Does your father approve of and encourage you in your occupational choice?
- a) $\frac{27}{26}$ yes b) $\frac{3}{4}$ no

24. Does your mother approve of and encourage you in your occupational choice?
- a) $\frac{27}{28}$ yes b) $\frac{3}{1}$ no c) $\frac{0}{1}$ Not Applicable
25. Do you feel that your mother understands you?
- a) $\frac{21}{22}$ yes b) $\frac{9}{8}$ no
26. Do you feel that your father understands you?
- a) $\frac{16}{22}$ yes b) $\frac{13}{6}$ no c) $\frac{1}{2}$ not applicable
27. Did one of your parents suggest your occupational choice to you?
- a) $\frac{0}{3}$ Mother b) $\frac{6}{1}$ Father c) $\frac{1}{0}$ Both d) $\frac{23}{26}$ Neither
28. The basis for your choice of occupation was primarily (honestly)?
- a) $\frac{4}{2}$ Altruistic b) $\frac{9}{10}$ Security (economic oriented) c) $\frac{17}{18}$ Personal Satisfaction
29. In growing up, which of the following were you most concerned with?
- a) $\frac{11}{14}$ Mastery b) $\frac{19}{16}$ Having Friends and Being Liked (Affiliation)
30. Have you frequently been concerned about "identity" or who you really are?
- a) $\frac{17}{19}$ yes b) $\frac{17}{11}$ no
31. If you were to rate your presumed level of commitment to your chosen occupational field, insofar as your planned scheme of life, what would it be on a scale from 1 (very little) to 5 (great deal)?
- $\frac{3.93}{3.97}$
Level of Commitment
32. What are your present personal lifestyle plans for the future?
- a) $\frac{18}{23}$ Marriage b) $\frac{8}{2}$ Cohabitation c) $\frac{4}{5}$ Single

33. What are your present family plans for the future if applicable?
- a) 17/18
Have Children
(includes adoption)
- b) 9/7
Childless
- c) 4/5
Not applicable
(see #32)
34. If you plan to have (or adopt) children, how many would you like?
- 3.12/2.39
Mean Number
35. How much do you typically plan to work in the future?
- a) 24/27
Full-time
- b) 5/2
Part-time
- c) 1/1
Little or None
36. If you marry and have a family, do you plan to work over the course of your married life?
- a) 17/9
Continuously
- b) 13/21
Discontinuously (Taking time out
for child-rearing or home-making)
37. Do you feel that there is a potential conflict between fulfilling yourself as a wife and mother, and fulfilling yourself as an individual?
- a) 10/11
yes
- b) 20/19
no
38. If you had to point to some one person or group of people who have been most influential to you in helping to inspire either your choice of occupation or your persevering in that choice, who would that be?
- a) 6/5
College Faculty
- b) 11/6
Parent(s)
- c) 6/5
Peers
- d) 7/3
Beau/Spouse

REFERENCE NOTES

1. Fowler, M. G. Stereotyped female gender-roles: Practical and theoretical implications for women and psychology. Unpublished doctoral area paper, University of Florida, 1974.
2. Lockhart, M. Personal communication, March, 1974.
3. Webb, W. B. Personal communication, June, 1974.
4. Bem, S. L. & Korula, C. W. Scoring packet for the Bem Sex-Role Inventory. Unpublished manuscript, Stanford University, 1974.
5. Frieze, I. H. Attributions of the causes of success and failure as internal and external barriers to achievement in women. Paper presented at the Mid-Winter National Research Conference of the Association of Women in Psychology (AWP), Tennessee, 1976.
6. Fisher, J. E. Effects of a competitive atmosphere on causal attributions: Theoretical implications. Paper presented at the meeting of the Eastern Psychological Association, New York, 1975.
7. Burlin, D. Locus of control and female occupational aspiration. Unpublished manuscript, Syracuse University, 1975.
8. Hall, D. T. & Gordon, F. E. The career choices of married women: Effects on conflict, role behaviour, and satisfaction (Paper No. 29). Toronto, Canada: York University, Faculty of Administrative Studies Behaviour Research Program, June, 1972.

REFERENCES

- Angrist, S. S. Personality maladjustment and career aspirations of college women. Sociological Symposium, 1970, 5 (Fall), 1-8.
- Angrist, S. S. The study of sex-roles. Journal of Social Issues, 1969, 25 (1), 215-232.
- Annett, J. Feedback and human behaviour. Baltimore, Md.: Penguin Books, 1969.
- Atkinson, J. W. & Feather, N. T. A theory of achievement motivation. New York: Wiley & Sons, 1966.
- Bailyn, L. Career and family orientations of husbands and wives in relation to marital happiness. Human Relations, 1971, 23 (2), 97-113.
- Bakan, D. The duality of human existence. Chicago, Ill.: Rand McNally, 1966.
- Bardwick, J. M. Psychology of women: A study of biocultural conflicts. New York: Harper & Row, 1971.
- Baruch, R. The achievement motive in women: Implications for career development. Journal of Personality & Social Psychology, 1967, 5, 260-267.
- Bem, S. L. The measurement of psychological androgyny. Journal of Consulting & Clinical Psychology, 1974, 42, 155-162.
- Bem, S. L. Sex-role adaptability: One consequence of psychological androgyny. Journal of Personality & Social Psychology, 1975, 31 (4), 634-643.
- Bem, S. L. Beyond androgyny: Some presumptuous prescriptions for a liberated sexual identity. In J. Sherman & F. Denmark (Eds.), Psychology of women: Future directions of research. New York: Psychological Dimensions, in press.
- Bem, S. L. & Bem, D. J. Training the woman to know her place: The power of a nonconscious ideology. In M. H. Garskof (Ed.), Roles women play. Belmont, Cal.: Brooks/Cole, 1971.

- Bernard, J. The status of woman in modern patterns of culture. The Annals, 1968, 375, 3-14.
- Bird, C. The sex map of the work world. In M. H. Garskof (Ed.), Roles women play. Belmont, Cal.: Brooks/Cole, 1971.
- Block, J. H. Conceptions of sex role: Some cross cultural and longitudinal perspectives. American Psychologist, 1973, 28, 512-525.
- Broverman, I. K., Broverman, D. M., Clarkson, F. E., Rosenkrantz, P. S., & Vogel, S. R. Sex-role stereotypes and clinical judgments of mental health. Journal of Consulting Psychology, 1970, 34, 1-7.
- Broverman, I. K., Vogel, S. R., Broverman, D. M., Clarkson, F. E., & Rosenkrantz, P. S. Sex-role stereotypes: A current appraisal. Journal of Social Issues, 1972, 28, (2), 59-78.
- Carlson, R. Understanding women: Implications for personality theory and research. Journal of Social Issues, 1972, 28, (2), 17-31.
- Clarkson, F. E., Vogel, S. R., Broverman, I. K., Broverman, D. M., & Rosenkrantz, P. S. Family size and sex-role stereotypes. Science, 1970, 167, 390-393.
- Cohen, B. P. Unpublished studies for the Laboratory for Social Research, Stanford University, 1965. (Dornbusch, S. M. Afterword. In E. E. Maccoby (Ed.) The development of sex differences. Stanford, Cal.: Stanford University Press, 1966)
- D'Andrade, R. Sex differences and cultural institutions. In E. E. Maccoby (Ed.), The development of sex differences. Stanford, Cal.: Stanford University Press, 1966.
- de Beauvoir, S. The second sex. New York: Alfred A. Knopf, 1953.
- Dornbusch, S. M. Afterword. In E. E. Maccoby (Ed.), The development of sex differences. Stanford, Cal.: Stanford University Press, 1966.
- Douvan, E. New sources of conflict in females at adolescence and early adulthood. In E. L. Walker (Ed.), Feminine personality and conflict. Belmont, Cal.: Brooks/Cole, 1970.
- Douvan, E. & Adelson, J. The adolescent experience. New York: Wiley & Sons, 1966.
- Eagly, A. H. & Anderson, P. Sex role and attitudinal correlates of desired family size. Journal of Applied Social Psychology, 1974, 4 (2), 151-164.

- Entwisle, D. R. & Greenberger, E. Adolescents' views of women's work role. American Journal of Orthopsychiatry, 1972, 42 (4), 648-656.
- Feather, N. T. Change in confidence following success or failure as a predictor of subsequent performance. Journal of Personality & Social Psychology, 1968, 9 (1), 38-46.
- Feather, N. T. Attribution of responsibility and valence of success and failure in relation to initial confidence and task performance. Journal of Personality & Social Psychology, 1969, 13 (2), 129-144.
- Fleishman, E. A. Toward a taxonomy of human performance. American Psychologist, 1975, 30 (12), 1127-1149.
- Gannon, M. J. & Hendrickson, D. H. Career orientation and job satisfaction among working wives. Journal of Applied Psychology, 1973, 57 (3), 339-340.
- Garskof, M. H. Roles women play. Belmont, Cal.: Brooks/Cole, 1971.
- Gump, J. P. Sex-role attitudes and psychological well-being. Journal of Social Issues, 1972, 28 (2), 79-92.
- Guilford, J. P. Fundamental statistics in psychology and education. New York: McGraw-Hill, 1965.
- Heider, F. The psychology of interpersonal relations. New York: Wiley, 1958.
- Hoffman, L. W. Fear of success in males and females: 1965 and 1971. Journal of Consulting & Clinical Psychology, 1974, 42 (3), 353-358.
- Hoffman, L. W. Early childhood experiences and women's achievement motives. Journal of Social Issues, 1972, 28 (2), 129-155.
- Horner, M. S. Toward an understanding of achievement-related conflicts in women. Journal of Social Issues, 1972, 28 (2), 157-175.
- Jackson, D. N. Personality Research Form: Manual. Goshen, New York: Research Psychologists Press, 1974.
- Jenkin, N. & Vroegh, K. Contemporary concepts of masculinity and femininity. Psychological Reports, 1969, 25 (3), 679-697.

- Kagan, J. Personality development. New York: Harcourt Brace Jovanovich, 1971.
- Kanekar, S. & Ahluwalia, R. B. Academic aspirations in relation to sex and physical attractiveness. Psychological Reports, 1975, 36, 834.
- Kasten, K. Toward a psychology of being: A masculine mystique. Journal of Humanistic Psychology, 1972, 12 (2), 23-43.
- Karabenick, S. A. & Marshall, J. M. Performance of females as a function of fear of success, fear of failure, type of opponent, and performance-contingent feedback. Journal of Personality, 1974, 42, 220-237.
- Keniston, K. & Keniston, E. An American anachronism: The image of women and work. American Scholar, 1964, 33, 355-375.
- Kirk, R. E. Experimental design: Procedures for the behavioral sciences. Belmont, Cal.: Brooks/Cole, 1968.
- Korman, H. K. Toward a hypothesis of work behavior. Journal of Applied Psychology, 1970, 54, 31-41.
- Kreps, J. Sex in the marketplace: American women at work. Baltimore, Md.: Johns Hopkins Press, 1973.
- Lipman-Blumen, J. How ideology shapes women's lives. Scientific American, 1972, 226, 34-42.
- Lott, B. E. Who wants the children? Some relationships among attitudes toward children, parents, and the liberation of women. American Psychologist, 1973, 28 (7), 573-582.
- Lunneborg, P. W. Stereotypic aspects in masculinity-femininity measurement. Journal of Consulting & Clinical Psychology, 1970, 34 (1), 113-118.
- Lunneborg, P. W. & Rosenwood, L. W. Need affiliation and achievement: Declining sex differences. 1972. ERIC Document Reproduction Service No. ED 061 548, 24pp. (Women's Studies Abstracts, 1973, 3 (1), No. 039)
- Lynn, D. B. Parental and sex-role identification. Berkeley, Cal.: McCutchan, 1969.
- MacBrayer, C. T. Differences in perception of the opposite sex by males and females. Journal of Social Psychology, 1960, 52, 309-314.

- Maccoby, E. E. The development of sex differences. Stanford, Cal.: Stanford University Press, 1966.
- McClelland, D. C., Atkinson, J. R., Clark, R. A., & Lowell, E. L. The achievement motive. New York: Appleton-Century-Crofts, 1953.
- McGuigan, F. J. The effect of precision, delay and schedule of knowledge of results on performance. Journal of Experimental Psychology, 1959, 58, 79-84.
- McGuigan, F. J. Experimental psychology: A methodological approach. New Jersey: Prentice-Hall, 1968.
- McGuigan, F. J., Hutchens, C., Eason, N., & Reynolds, T. The retroactive interference of motor activity with knowledge of results. Journal of General Psychology, 1964, 70, 279-281.
- McKee, J. P. & Sherriffs, A. C. The differential evaluation of males and females. Journal of Personality, 1957, 25 (3), 357-371.
- McKee, J. P. & Sherriffs, A. C. Men's and women's beliefs, ideals, and self-concept. American Journal of Sociology, 1959, 64, 356-363.
- Mednick, M. S. & Tangri, S. S. New social psychological perspectives on women. Journal of Social Issues, 1972, 28 (2), 1-16.
- Miller, C. & Swift, K. The urban strategist: Desexing the language. New York, 1971, 4, 103-104.
- Murray, H. A. Explorations in personality. Cambridge: Harvard University Press, 1938.
- Neulinger, J. Perceptions of the optimally integrated person: A redefinition of mental health. Proceedings of the 76th Annual Convention of the American Psychological Association (APA), 1968, 553-554.
- O'Leary, V. E. Some attitudinal barriers to occupational aspirations in women. Psychological Bulletin, 1974, 81 (11), 809-826.
- Orden, S. R. & Bradburn, N. M. Working wives and marriage happiness. The American Journal of Sociology, 1969, 74, 392-407.
- Rapoport, R. & Rapoport, R. N. The dual career family: A variant pattern and social change. Human Relations, 1969, 22 (1), 3-30.

- Rapoport, R. & Rapoport, R. N. Early and later experiences as determinants of adult behaviour: Married women's family and career patterns. British Journal of Sociology, 1971, 22 (1), 16-30.
- Rosenkrantz, P., Vogel, S., Bee, H., Broverman, I. K., & Broverman, D. M. Sex-role stereotypes and self-concepts in college students. Journal of Consulting & Clinical Psychology, 1968, 32 (3), 287-295.
- Rotter, J. B. Generalized expectancies for internal versus external control of reinforcement. Psychological Monographs, 1966, 89: (Whole No. 609).
- Rotter, J. B. Some problems and misconceptions related to the construct of internal versus external control of reinforcement. Journal of Personality & Social Psychology, 1975, 43 (1), 56-67.
- Schultz, D. P. The human subject in psychological research. Psychological Bulletin, 1969, 72 (3), 214-228.
- Shaw, M. E. & Wright, J. M. Scales for the measurement of attitudes. New York: McGraw-Hill, 1967.
- Shelton, P. B. Achievement motivation in professional women. Dissertation Abstracts, 1968, 28 (10A), 4274.
- Sherriffs, A. C. & McKee, J. P. Qualitative aspects of beliefs about men and women. Journal of Personality, 1957, 25, 451-464.
- Singer, J. L. & Singer, D. G. Personality. In P. H. Mussen & M. R. Rosenzweig (Eds.), Annual Review of Psychology (Vol. 23). Palo Alto, Cal.: Annual Reviews, 1972.
- Sundheim, B. J. The relationships among "n" achievement, "n" affiliation, sex-role concepts, academic grades, and curricular choice. Dissertation Abstracts, 1963, 23, 3471.
- Super, D. E. The psychology of careers. New York: Harper, 1957.
- Stein, A. H. & Bailey, M. M. The socialization of achievement orientation in females. Psychological Bulletin, 1973, 80 (5), 345-366.
- Steinmann, A. Lack of communication between men and women. Marriage & Family Living, 1958, 20, 350-353.
- Steinmann, A. & Fox, D. J. Male-female perceptions of the female role in the United States. Journal of Psychology, 1966, 64, 265-276.

- Tangri, S. S. Determinants of occupational role-innovation among college women. Journal of Social Issues, 1972, 28 (2), 177-200.
- Van Dusen, R. A. & Sheldon, E. B. The changing status of American women: A life cycle perspective. American Psychologist, 1976, 31 (2), 106-116.
- Vogel, S. R., Broverman, I. K., Broverman, D. M., Clarkson, F. E., & Rosenkrantz, P. S. Maternal employment and perception of sex-roles among college students. Developmental Psychology, 1970, 3, 384-391.
- Vogel, S. R., Rosenkrantz, P. S., Broverman, I. K., Broverman, D. M., & Clarkson, F. E. Sex-role self-concepts and life style plans for young women. Journal of Consulting & Clinical Psychology, 1975, 43 (3), 427.
- Weiss, P. Some aspects of femininity. Dissertation Abstracts, 1962, 23, 1083.
- Weisstein, N. Psychology constructs the female, or the fantasy life of the male psychologist. In M. H. Garskof (Ed.), Roles women play. Belmont, Cal.: Brooks/Cole, 1971, 68-83.
- Wheeler, C. L. & Carnes, E. F. Relationships among self-concepts, ideal-self-concepts, and stereotypes of probable and ideal vocational choices. Journal of Counseling Psychology, 1968, 15, 530-535.

BIOGRAPHICAL SKETCH


Marguerite Gilbert Fowler was born in Mississippi in March, 1942. She was graduated from Fremont Union High School, Sunnyvale, California, in 1960. She was awarded the degree of Bachelor of Arts with distinction in Psychology at California State University in 1966. She also maintained a strong collateral interest in the natural sciences, which comprised her undergraduate minor. She continued on the following year in the Master of Arts Program in Psychology at California State University in San Jose, California. In 1967 she accepted a position in industry as an engineering psychologist, where she participated in the Research and Development Program of Philco-Ford Corporation's Western Development Laboratories in Palo Alto, California. She was awarded the Master of Arts in Psychology in 1969.

She began her doctoral work in Psychology at the University of Florida in 1971, and has since that time been a National Defense Education Act Fellow and a United States Public Health Service Fellow. In June, 1975 she completed her internship in Clinical Psychology. As a pre-doctoral intern she served as a United States Criminal Justice System Trainee at the Federal Correctional Institution, Tallahassee, Florida. She was also concurrently affiliated in a training capacity with the Apalachee Community Mental Health


Center and the Assessment Laboratory of Dr. E. I. Megargee of Florida State University, both in Tallahassee, Florida.

She is presently a member of the Association for Women in Psychology, and is an affiliate of Division 35 (Psychology of Women) of the American Psychological Association. She has been appointed a National Institutes of Mental Health Postdoctoral Fellow in Clinical Psychology at Indiana University Medical School, 1976-1977.


I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.


Audrey S. Schumacher, Chairman
Professor of Psychology

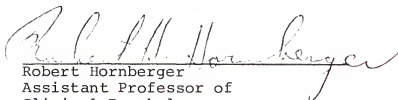
I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.


Wilse B. Webb
Graduate Research Professor
of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.


Paul Satz
Professor of Clinical Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.


Robert Hornberger
Assistant Professor of
Clinical Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



Madelyn Lockhart
Professor of Economics

This dissertation was submitted to the Graduate Faculty of the Department of Psychology in the College of Arts and Sciences and to the Graduate Council, and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

June, 1976

Dean, Graduate School